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SYSTEM 2000[®] V2

Basic, Multi-User[™], QueX[™], and Interface to CICS

Installation Guide



The correct bibliographic citation for this manual is as follows: SAS Institute Inc. 2007. *SYSTEM 2000® V2 Basic, Multi-User™, QueX™, and Interface to CICS: Installation Guide*. Cary, NC: SAS Institute Inc.

SYSTEM 2000® V2 Basic, Multi-User™, QueX™, and Interface to CICS: Installation Guide

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ISBN 978-1-59994-580-4

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SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

1st printing, September 2007

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Chapter 1: Introduction

This document describes the steps necessary to install and validate the four SYSTEM 2000 software products: basic SYSTEM 2000 software, Multi-User software, QueX software and the interface to CICS.

To install the products you have licensed, prepare job JCLGENER to retrieve job JCLINST from the media, and then run that job to unload the media.

After installation, run the tests provided to validate operation of the licensed products.

Please review all the installation steps before executing any of them. If you have questions about installation, contact the Austin Technical Support Department at S2K@SAS.COM or 512-250-9170.

When you have installed the Version 2 software, you will have the following disk data sets:

File	3390 Space	Physical Characteristics and Description
1	20 cylinders	DSN=S2K.V2.LOAD LRECL=UND RECFM=U BLKSIZE=7294 DSORG=PO All load modules, including executable module SYS2K. A description of each module is in Appendix B.
2	20 cylinders	DSN=S2K.V2.SOURCE LRECL=80 RECFM=FB BLKSIZE=6160 DSORG=PO Installation JCL, macros, validation programs, command files, data files, and source routines. A description of each member is in Appendix C.
3	2 cylinders	DSN=S2K.V2.CNTL LRECL=80 RECFM=FB BLKSIZE=6160 DSORG=PO Data set allocated at installation time to receive all generated JCL. This file is not on the delivery media. A description of each member is in Appendix D.
4	1 cylinder	DSN=S2K.V2.VALID LRECL=132 RECFM=FBA BLKSIZE=1320 DSORG=PO Expected output from validation tests. A description of each member is in Appendix E.

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Unload and Catalog Media Contents

The following is the JCL to copy the data set S2K.V2.JCLINST from media to disk.

Figure 2.1 JCLGENER

```
//JCLGENER JOB
//*-----MODIFY JOB CARD AS NEEDED-----
//*****
//* COPY JCLINST FILE FROM DELIVERY TAPE
//*****
//*
//COPY      EXEC PGM=IEBGENER
//SYSPRINT DD  SYSOUT=A
//SYSUT1    DD  DSN=S2K.V2.JCLINST,DISP=OLD,LABEL=(1,SL),
//            UNIT=CART,VOL=SER=XXXXXX,
//            DCB=(DEN=4,LRECL=80,BLKSIZE=6160,RECFM=FB)
//SYSUT2    DD  DSN=S2K.V2.JCLINST,DISP=(NEW,CATLG,DELETE),
//            UNIT=SYSDA,SPACE=(TRK,(1,1))
//SYSIN     DD  DUMMY
//*
```

When job JCLINST (Figure 2.2) is run, the SYSTEM 2000 libraries are preallocated and cataloged using the IEFBR14 utility, and then populated with the delivery media contents using the IEBCOPY utility.

Figure 2.2 JCLINST

```
//JCLINST JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
//* MEMBER NAME: JCLINST
//*
//* CREATED ON: 5 OCT 2004 AT 16:24:04
//*
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//* AGREEMENT WITH SAS INSTITUTE.
//*
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//* COMPUTER SOFTWARE - RESTRICTED RIGHTS (JUNE 1987).
//*
```

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```
/* *****  
/* ALLOCATE NEW S2K DATA SETS  
/* *****  
/*  
//NEWALOC EXEC PGM=IEFBRL4  
//LOAD DD DSNAME=S2K.V2.LOAD,  
// DISP=(NEW,CATLG),  
// UNIT=DISK,  
// SPACE=(CYL,(20,0,70)),  
// VOL=SER=XXXXXX,  
// DCB=(DSORG=PO,RECFM=U,BLKSIZE=7294)  
//SOURCE DD DSNAME=S2K.V2.SOURCE,  
// DISP=(NEW,CATLG),  
// UNIT=DISK,  
// SPACE=(CYL,(20,0,100)),  
// VOL=SER=XXXXXX,  
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=6160)  
//CNTL DD DSNAME=S2K.V2.CNTL,  
// DISP=(NEW,CATLG),  
// UNIT=DISK,  
// SPACE=(CYL,(2,0,70)),  
// VOL=SER=XXXXXX,  
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=6160)  
//VALID DD DSNAME=S2K.V2.VALID,  
// DISP=(NEW,CATLG),  
// UNIT=DISK,  
// SPACE=(CYL,(1,1,70)),  
// VOL=SER=XXXXXX,  
// DCB=(DSORG=PO,RECFM=FBA,LRECL=132,BLKSIZE=1320)  
/*  
/* *****  
/* COPY TAPE CONTENTS TO DISK  
/* *****  
/*  
//LOADALL EXEC PGM=IEBCOPY  
//SYSPRINT DD SYSOUT=A  
//SYSUT3 DD UNIT=SYSDA,  
// SPACE=(TRK,(50))  
//SYSUT4 DD UNIT=SYSDA,  
// SPACE=(TRK,(50))  
//OUTLOAD DD DSNAME=S2K.V2.LOAD,  
// DISP=OLD  
//OUTSOURC DD DSNAME=S2K.V2.SOURCE,  
// DISP=OLD  
//OUTVAL DD DSNAME=S2K.V2.VALID,  
// DISP=OLD  
//INLOAD DD DSNAME=S2K.V2.LOAD,  
// UNIT=CART,  
// DISP=OLD,  
// LABEL=(2,SL),  
// VOL=SER=CCCCC  
//INSOURCE DD DSNAME=S2K.V2.SOURCE,  
// UNIT=CART,  
// DISP=OLD,  
// LABEL=(3,SL),  
// VOL=REF=* .INLOAD  
//INVAL DD DSNAME=S2K.V2.VALID,  
// UNIT=CART,  
// DISP=OLD,  
// LABEL=(4,SL),  
// VOL=REF=* .INLOAD  
//SETLOAD DD DSNAME=S2K.S2KSETI.LOAD,  
// UNIT=CART,
```



```

//          DISP=OLD,
//          LABEL= ( 5, SL) ,
//          VOL=REF=* . INLOAD
//SETTEXT  DD  DSNAME=S2K.S2KSETI . SOURCE,
//          UNIT=CART,
//          DISP=OLD,
//          LABEL= ( 6, SL) ,
//          VOL=REF=* . INLOAD
//SYSIN    DD  *
            COPY OUTDD=OUTLOAD, INDD= ( ( INLOAD, R) )
            COPY OUTDD=OUTSOURC, INDD= ( ( INSOURCE, R) )
            COPY OUTDD=OUTVAL, INDD= ( ( INVAL, R) )
            COPY OUTDD=OUTLOAD, INDD= ( ( SETLOAD, R) )
            COPY OUTDD=OUTSOURC, INDD= ( ( SETTEXT, R) )
/*
//*/

```

Generate Batch JCL Members Using S2KIVR

You begin installation by installing and executing the S2KIVR application. This is a REXX-based ISPF application that generates all of the SYSTEM 2000 batch JCL members.

Installing S2KIVR

To install S2KIVR, follow these steps:

- 1) Copy the REXX execs S2KIVR and S2KIVRMN from the SYSTEM 2000 SOURCE library (S2K.V2.SOURCE) to a TSO CLIST or REXX library that is accessible to the person who will be running the exec.
- 2) Copy member S2KKEYS from the SYSTEM 2000 SOURCE library into an ISPF table library (ISPTLIB).
- 3) Modify the S2KIVR exec. Find the variable assignment `s2kisptl = “S2K.V2.ISPTLIB”`. This statement is right below the comment block at the beginning of the exec. Change the value of this variable to the name of the table library from Step 2.

Installation of S2KIVR is now complete.

Running S2KIVR

There are three ways to invoke the S2KIVR exec:

Method 1: **TSO S2KIVR**

Method 2: **TSO S2KIVR NEW**

Method 3: **TSO S2KIVR PUNCH mbrname1 mbrname2 ...**

Method 1:

Enter the command **TSO S2KIVR** from an ISPF command line. The first time you run the exec, it will prompt you for the names of the ISPF panel library and the ISPF file tailoring skeleton library. These members are stored in the SYSTEM 2000 SOURCE library, so use this data set name for both prompts.

After you enter the two requested data set names, the main S2KIVR panel is displayed. Some of the fields are blank and some contain default values. Use the checklist in Appendix A as a worksheet for completing these fields. Fill in any blank ones and change any default values that are different in your environment.

Each time you press the ENTER key, error and validation checks are done against many of the input fields. Error messages are issued for fields in error, and the cursor is placed in the error field. Correct the error and press the ENTER key again. Keep doing this until all fields are entered and no messages are displayed.

You can press the PF1 key at any time to see Help information for the application. Pressing PF1 while the cursor is on the command line displays the main application Help panel. Pressing PF1 while the cursor is on a data field displays Help for that field.

If the PF keys are not displayed in the S2KIVR panel, you can enter the primary command **FKA ON**. To turn off the PF key display, enter **FKA OFF**.

Method 2:

Enter the command **TSO S2KIVR NEW** from an ISPF command line. The NEW parameter tells S2KIVR to prompt you for the names of the ISPF panel library and the ISPF file tailoring skeleton library, just as it did the first time you ran the exec. This is useful if these library names change and you need to register the new names with S2KIVR. After you have entered the new names, S2KIVR displays the main panel showing the new data set names.

Method 3:

Using Method 3 you can invoke the application and generate specified JCL members in one step without having to go through the main S2KIVR panel or the member list panel that the PUNCH command displays.

From an ISPF command line, enter **TSO S2KIVR PUNCH mbrname1 mbrname2...**

You can enter as many member names as will fit on the command line. Separate each member name with a single space.

S2KIVR displays the pop-up panel showing the members as they are being generated. When all the members have been created, a message panel is displayed, notifying you that it has finished.

The application you were running at the time you invoked S2KIVR will be undisturbed and you will be returned to that application when S2KIVR has finished.

S2KIVR Commands

S2KIVR recognizes the following four commands. Enter these commands in the primary command field of the S2KIVR panel.

SAVE	saves the data entry fields of the panel to a specified file.
LOAD	loads the data entry fields of the panel from a specified file.
GO	generates all JCL members for selected products.
PUNCH	generates only specified JCL members.

SAVE Command

The SAVE command copies all of the data entry fields from the panel to a disk file specified by the user.

Example: **SAVE 'S2KIVR.PANEL.FIELDS'**

This example writes all of the data entry fields to the file 'S2KIVR.PANEL.FIELDS'. If the file does not exist, it will be created.

LOAD Command

The LOAD command reads all of the data entry fields from a file specified by the user and puts them into the panel.

Example: **LOAD 'S2KIVR.PANEL.FIELDS'**

This example copies all of the data entry fields from the file 'S2KIVR.PANEL.FIELDS' and puts them into the panel.

GO Command

The GO command tells S2KIVR to generate all of the batch JCL members for the selected products (Base, Multi-User, CICS, and QueX). When the GO command is entered, a pop-up panel is displayed showing the product name and the JCL members for that product that are being generated.

The GO command uses the following fields from the main panel:

Base Product Installation
Multi-User Product Installation
CICS Interface Installation
QueX Installation
Generate User-Supplied JCL members

If the values for any of these fields is **YES**, the GO command generates all of the JCL members for that product. If the field is **NO**, JCL members for that product are not generated.

PUNCH Command

The PUNCH command generates only selected JCL members. You enter the member names on the command line along with the command. You can enter as many member names as will fit in the command line. Separate each member name with a single space.

For the PUNCH command, the various product installation fields are ignored. They can be either **YES** or **NO**. The only requirements for generating individual members is that they exist in the file tailoring skeleton library and there are entries for them in the corresponding control member (#BASEMBR, #CICSMBR, etc.).

Example: **PUNCH JCLASM JCLCOB JCLCGIO JCLCGID JCLCL01 JCLCL02**

In this example, only the members specified in the command are generated. This is useful if a member has been lost, deleted, or changed so much that it's easier just to start over with an original version.

If you want to generate more members that will fit on the command line, just enter the PUNCH command by itself. A member list panel is displayed and you can select which members are to be generated.

While the member list panel is displayed, you can select members in any of the following ways:

Enter **S *** on the primary command line to select all members.

Enter **S membername** on the primary command line to select one member. Unlike the S2KIVR PUNCH command, you can only select one member at a time when using the member name.

Enter **S** on the line command field next to any member(s) you want to select. You can scroll up and down through the list using the PF7 and PF8 keys.

Selected members have the word “SELECTED” displayed next to the member name.

You can unselect one or more selected members in either of these ways:

Enter **UNSELECT** on the primary command line. This will unselect all selected members. **UNSELECT** can be abbreviated **U** or **UNSEL**.

Enter **U** on the line command next to the member to be unselected. This will unselect only that member.

When you unselect a member, the word “SELECTED” that was next to the member name disappears to show that the member is no longer selected.

To generate the JCL for the selected members, press the PF3 key to exit the member list panel and return to the main S2KIVR panel. A pop-up panel is displayed that shows the JCL member names as they are being generated.

Exit S2KIVR by pressing the PF3 or PF4 keys. When you end the exec, all of the input fields are saved. The next time you run the exec, the fields are recalled and displayed in the panel. There is no need to re-enter any of the fields unless you want to change them.

How S2KIVR Works

For each JCL member that is generated, S2KIVR reads the corresponding file tailoring skeleton. Variable names in the skeletons are replaced with the values from the S2KIVR panel, and then the modified member is written to the output JCL library. The original file tailoring skeletons are not changed.

The members that are read are controlled by the entries in the #BASEMBR, #MUMBR, #CICSMBR, and #QUEXMBR members of the file tailoring skeleton library. *Do not modify the contents of these members, or any member that is supplied by SAS in this library.* See the following section for adding your own JCL members to the S2KIVR application.

Each output JCL member contains comment lines that have the date and time the member was last generated.

The member statistics are also updated each time a member is generated. These statistics can be viewed from any ISPF member list display.

Adding Your Own JCL Members to S2KIVR

To add your own JCL members to the S2KIVR application, follow these steps:

- 1) Create a JCL file tailoring skeleton and add it to the S2KIVR library (S2K.V2.ISPSLIB).

Appendix A contains the description of all the fields on the S2KIVR panel. Along with the description of each field is the internal variable name for that field. You can use these variable names in your file tailoring skeletons, and when S2KIVR generates the JCL member, it will replace these variables with the values from the panel, just as it does for the original JCL members.

- 2) Create a member in the file tailoring skeleton library called #USERMBR. Add one record to this member for each user-supplied JCL member. The member name must be in columns 1 through 8 of the record. You can use the #BASEMBR member as an example.
- 3) In the S2KIVR panel, enter **YES** in the **Generate User Members** field. This will cause S2KIVR to read the member names from the #USERMBR file so that it can create the user-supplied JCL members when the GO command is used.

After these three steps are completed, both the GO and PUNCH commands will generate the user-supplied JCL members.

Copying ISPF Panels and File Tailoring Skeletons to Another Library

JCL member JCLISPF is provided in case you want to copy the ISPF panels and file tailoring skeletons to other libraries. This is an optional step.

You can run JCLISPF only after it has been generated by S2KIVR. Edit the job and change the data set names in the OUTPANEL and OUTSKEL DD statements to appropriate library names, and then submit the job. These output libraries must already exist; the job does not create them. The members are copied (not moved) to the output libraries.

The next time you run S2KIVR, change the name of the panel and file tailoring libraries to these new data sets.

The output panel library requires 5 tracks and 11 directory blocks to hold the S2KIVR panels. The output skeleton library requires 14 tracks and 16 directory blocks to hold the skeletons. These numbers assume half-track blocking on a 3390 device.

Set Up PROC, CLIST, and Help Libraries

After the base SYSTEM 2000 installation is complete, you might want to move the SAS procedures, CLISTs, and Help files, described below, into your production libraries. Job JCLPROCL is supplied for this purpose; it assumes you generated these members on your CNTL library. Refer to the members themselves and to their corresponding

Help files for detailed information about CLIST and PROC execution. The CLISTs generated on your CNTL library are as follows:

GENIUS	executes the Genius validation CLISTs.
QUEX	executes the QueX software.
QUVB	executes the QueX User View Builder.
S2K	executes SYSTEM 2000 software single-user.
S2KFRDB	frees database files; called by the S2KFREE CLIST when the DBN parameter is specified.
S2KFREE	frees all files allocated to SYSTEM 2000 software.
S2KM	executes SYSTEM 2000 Multi-User software.

Corresponding online TSO Help files that describe the above CLISTs are generated on your CNTL library. After they are moved to your system Help library, enter **HELP <CLIST name>** to display information about a CLIST.

The batch JCL procedures generated on your CNTL library are as follows:

S2KMU	executes batch Multi-User interface SYS2KJOB.
S2KSU	executes single-user SYSTEM 2000 software; allocates all files except database files.

For the SAS/ACCESS Interface to SYSTEM 2000 software, you need to make minor changes to your SAS CLIST and to your SAS PROC. The SASS2K CLIST and SASS2KP PROC on your CNTL library should be merged with your SAS CLIST and SAS PROC in order to make SYSTEM 2000 software available.

The CLIST modifications are keyword parameters and ALLOC statement additions for the SYSTEM 2000 LOAD library, the S2KCOM file, and the S2KPARMS file. Also, S2KLOAD should be added to your TASKLIB statement.

The PROC modifications are the addition of keyword parameters for the SYSTEM 2000 LOAD library and the S2KCOM file. S2KLOAD should be included in your STEPLIB concatenation. Also, you need DD statements for the S2KCOM, S2KPARMS, and S2KDEFC files.

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Assign an SVC Slot for XMS Multi-User

If you are installing XMS Multi-User, assign any user SVC slot from the valid range of 200 through 255; the SVC does not need to be of a particular type. You specify the SVC number when you code SVCNUM= in the JCLS2KIV job.

Apply Zap for the XMS Multi-User SVC Number

In order to indicate that you are running XMS Multi-User software, you must run job JCLZAP (Figure 3.1) to zap the appropriate SVC number in CSECT S2KCMC and in the CSECT SVCADR in all Multi-User interfaces. When Multi-User software is initialized, the control program S2KCMC puts the entry point of S2KPC into the system SVC table, where all address spaces can access the SVC number. S2KCMC also writes the SVC number to the S2KCOM file, which is read by the interfaces, so that Multi-User communication is established. See the *SYSTEM 2000 Software: Product Support Manual* for more information about S2KCMC execution.

Figure 3.1 JCLZAP

```
//JCLZAP JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLZAP
/*
/** CREATED ON: 5 OCT 2004 AT 16:24:45
/**
/******
/* APPLY ZAP FOR MULTI-USER SVC NUMBER
/******
/**
//ZAP PROC SYSOUT=A
//ZAP SVC EXEC PGM=IMASPZAP,
// PARM='IGNIDRFULL'
//SYSPRINT DD SYSOUT=&SYSOUT
//SYSLIB DD DSNAME=S2K.V2.LOAD,
// DISP=SHR
/**
// PEND END ZAP
/**
/******
/* APPLY ZAP FOR MULTI-USER SVC NUMBER
/******
/**
//ZAP EXEC ZAP
//SYSIN DD *
*
* ZAP CARDS FOR XMS SYSTEM 2000
```

```

*
NAME SYS2KJOB SVCADR
REP 0008 07010701
NAME S2KDMV6 SVCADR
REP 0008 07010701
NAME S2OP SVCADR
REP 0008 07010701
NAME MUPLINT SVCADR
REP 0008 07010701
NAME CLEARS2K SVCADR
REP 0008 07010701
NAME S2000 SVCADR
REP 0008 07010701
NAME SYS2KTPI SVCADR
REP 0008 07010701
NAME S2KSIP SVCADR
REP 0008 07010701
NAME SYS2K SVCADR
REP 0008 07010701
NAME S2KXBUF SVCADR
REP 0008 07010701
NAME S2KCMC S2KCMC
REP 000A 00ED
/*
//

```

Install XMS Multi-User Code

To install XMS Multi-User, run job JCLXAUTH (Figure 3.2). This job executes IEBCOPY to place the S2KCMC and S2KPC load modules into the authorized library designated by your systems programmer. It then links S2KCMC as authorized and allocates the S2KCOM file as a 30-byte permanent data set.

Note: The allocation of S2KCOM for Version 2 requires this file to be shared option 4.

For sites running more than one release of SYSTEM 2000 software, S2KCMC, S2KPC, and Multi-User must all be from the same SYSTEM 2000 release. If you are currently running Version 1 XMS Multi-User and want to run Version 2 XMS Multi-User, the following steps are recommended:

1. Assign a unique SVC to Version 2 XMS Multi-User.
2. Copy S2KCMC and S2KPC into a separate authorized library.
3. Create a separate S2KCOM file for Version 2.

Figure 3.2 JCLXAUTH

```

//JCLXAUTH JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
/*
/* MEMBER NAME: JCLXAUTH
/*
/** CREATED ON: 5 OCT 2004 AT 16:24:42
/*
//*****
/* COPY S2KCMC AND S2KPC TO AUTHORIZED LIBRARY
//*****
/*
//STEP1 EXEC PGM=IEBCOPY
//SYSUT3 DD UNIT=SYSDA,
// SPACE=(CYL,(1,1))
//SYSUT4 DD UNIT=SYSDA,
// SPACE=(CYL,(1,1))

```



```

//INFIL      DD DSNAME=S2K.V2.LOAD,
//           DISP=SHR
//OTFIL      DD DSNAME=S2K.V2.AUTH,
//           DISP=SHR
//SYSPRINT   DD SYSOUT=A
//SYSIN      DD *
            COPY INDD=INFIL,OUTDD=OTFIL
            S M=((S2KCMC,,R))
            S M=((S2KPC,,R))
/*
/*
/*****
/** LINK S2KCMC AS AUTHORIZED
/*****
/*
//LINK      EXEC PGM=IEWL,
//           PARM='AMODE=31,RMODE=24'
//SYSLMOD   DD DSNAME=S2K.V2.AUTH,
//           DISP=SHR
//SYSPRINT  DD SYSOUT=A
//SYSUT1    DD UNIT=SYSDA,
//           SPACE=(3400,(400,50))
//SYSLIB    DD DSNAME=S2K.V2.AUTH,
//           DISP=SHR
//SYSLIN    DD *
            INCLUDE SYSLIB(S2KCMC)
            ENTRY S2KCMC
            SETCODE AC(1)
            NAME S2KCMC(R)
/*
/*
/*****
/** ALLOCATE VSAM S2KCOM FILE
/*****
/*
//ALLOC     EXEC PGM=IDCAMS
//SYSUDUMP  DD SYSOUT=A
//SYSPRINT  DD SYSOUT=A
//SYSIN     DD *
            DEFINE CLUSTER -
                (NAME(S2K.V2.COM) -
                RECORDS(1,1) -
                VOLUMES(DISK01) -
                NUMBERED -
                CISZ(30) -
                RECORDSIZE(30,30) -
                REUSE -
                SHR(4) )
/*
//

```

Install Accounting Log Files

Job JCLACT (Figure 3.3) executes the utility that allocates space for and initializes the Multi-User Accounting Log files. After Multi-User completes execution, ACTUTIL dumps the accounting records that were written to these files.

Figure 3.3 JCLACT

```
//JCLACT JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLACT
/*
/* CREATED ON: 5 OCT 2004 AT 16:24:27
/*
/*****
/* ALLOCATE DATA SETS FOR ACCOUNTING LOG FILES
/*****
/*
//ACTBLK EXEC PGM=IEFBRL4
//MANX DD DSNAME=S2K.V2.ACCOUNT.MANX,
// DISP=(NEW,CATLG,DELETE),
// UNIT=SYSDA,
// VOL=SER=DISK01,
// SPACE=(CYL,(10)),
// DCB=(RECFM=VB,LRECL=252,BLKSIZE=9076,DSORG=PS)
//MANY DD DSNAME=S2K.V2.ACCOUNT.MANY,
// DISP=(NEW,CATLG,DELETE),
// UNIT=SYSDA,
// VOL=SER=DISK01,
// SPACE=(CYL,(10)),
// DCB=(RECFM=VB,LRECL=252,BLKSIZE=9076,DSORG=PS)
//
```

Permanent Multi-User VSAM Files

S2KPADnn and S2KUSER files are VSAM in Version 2. Multi-User initialization is quicker when these files are permanently allocated.

Figure 3.4 JCLMUFIL

```
//JCLMUFIL JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLMUFIL
/*
/* CREATED ON: 5 OCT 2004 AT 16:24:05
/*
/*****
/* ALLOCATE S2KPAD00 VSAM FILES USING IDCAMS
/*
/* NOTES:
/* CFSIZE MUST BE A VALID SYSTEM 2000 CFSIZE
/* RECORDSIZE MUST BE 7 BYTES LESS THAN CFSIZE.
/*
/* VALID CFSIZES AND RECORDSIZES:
/* 4096 4089
/* 7168 7161
/* 12288 12281
/* 18432 18432
/* 22528 22521
/* 26624 26617
/*
/* ALLOCATE THE MULTI-USER S2KUSERS FILE.
/*
/* THIS FILE MUST BE CFSIZE 12288.
```

```

/*
/*****
/*
//ALLOC EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=A
//SYSIN DD *
DEFINE CLUSTER +
  (NAME ('S2K.V2.S2KPAD00')) +
  NONINDEXED +
  VOL(DISK01) +
  CYLINDERS(5 10) +
  CISZ(4096) +
  RECORDSIZE(4089 4089) +
  SHR(2,3) +
  SPEED ) +
  DATA(NAME ('S2K.V2.S2KPAD00.DATA'))
DEFINE CLUSTER +
  (NAME ('S2K.V2.S2KUSERS')) +
  NONINDEXED +
  VOL(DISK01) +
  CYLINDERS(5 1) +
  CISZ(12288) +
  RECORDSIZE(12281 12281) +
  SHR(2,3) +
  REUSE +
  SPEED ) +
  DATA(NAME ('S2K.V2.S2KUSERS.DATA'))
/*

```


Chapter 4: CICS Installation

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S2KCUSE Requirements

The S2KCUSE module, which defines the SYSTEM 2000 interface in the CICS environment, is the only delivered load module that must be AMODE=31 and RMODE=24. All other interface load modules are linked with AMODE=31 and RMODE=ANY.

Each CICS interface can have a unique S2KCUSE module. This module is parameter driven, using the S2KUGEN macro. You specify the parameter values you want to change. Any parameter not specified in S2KCUSE picks up the default value specified in the S2KUGEN macro.

To change a parameter not in S2KCUSE, either add it or modify the S2KUGEN macro.

The following figure shows S2KCUSE as delivered. You should compare these values to those in your previous release and adjust accordingly. See the following section, "New S2KCUSE Parameters," for a description of parameters added in Versions 1 and 2.

Figure 4.1 S2KCUSE

```

S2KUGEN PLEX=64,          MAX NUMBER OF PLEX USERS          X
          PWAITS=2,       NUMBER OF 1 SECOND WAITS IF BUSY   X
          SCF=32,         MAX NUMBER OF SCF USERS          X
          MAXTERM=100,    MAX NUMBER OF TERMINALS          X
          DOSTOP=Y,       SHOULD S2K DO AUTO STOP S2K?      X
          CHKTRNS=N,     BUT FIRST CHECK NEXT TRANSID?    X
          TCTUA=N,       MRO ONLY, IS TCTUA AVAILABLE?    X
          TCTDSP=0,     DISPLACEMENT IF TCTUA IS AVAILABLE  X
          AOR1=,         AOR#1 APPLICATION ID            X
          AOR1TR=,      TOR TRANSID TO GET TO AOR#1      X
          AOR2=,         AOR#2 APPLICATION ID            X
          AOR2TR=,      TOR TRANSID TO GET TO AOR#2      X
          AOR3=,         AOR#3 APPLICATION ID            X
          AOR3TR=,      TOR TRANSID TO GET TO AOR#3      X
          S2KLOG=S2KL    DESTINATION FOR S2K STATS
END

```

PLEX specifies the number of PLEX users that can execute concurrently. If your PLEX programs are pseudo-conversational, you might need to increase this value. This value should not exceed the value of the USERS parameter in the Multi-User region.

PWAITS specifies the number of one-second intervals the interface waits while trying to obtain resources for the PLEX user when all are currently assigned. If no PLEX resources are available after this time, then the interface issues a return code of 43 to the PLEX application program.

SCF specifies the number of S2KU users that can be active in the Multi-User region simultaneously. This value should not exceed the value of the TPTHREADS parameter in the Multi-User region.

MAXTERM specifies the maximum number of S2KU users that can occupy resources in the CICS region. This value should not exceed the value of the TPSCRUN parameter in the Multi-User region.

New S2KCUSE Parameters

DOSTOP controls automatic STOP S2K processing. DOSTOP=N means that no automatic STOP S2K processing is done. Sites whose application programs always issue their own STOP S2K or execute in pseudo-conversational mode should execute with DOSTOP=N. Pseudo-conversational is defined as a series of individual transactions grouped together to form one logical transaction. Because the interface is unable to determine the last transaction in the series, it cannot safely issue a STOP S2K.

DOSTOP=Y means that automatic STOP S2K processing is activated and the interface will issue a STOP S2K when needed unless the transaction is considered pseudo-conversational.

CHKTRNS helps the interface determine whether a transaction is pseudo-conversational. A value of N means that if automatic STOP S2K processing is activated, then all transactions are considered not to be pseudo-conversational, and a STOP S2K is generated if needed. A value of Y means that if automatic STOP S2K processing is activated, then any transaction that terminates with the command-level command EXEC CICS RETURN TRANSID(*transid*) is considered pseudo-conversational.

TCTUA controls whether terminal error recovery is activated for sites running in an MRO environment. A value of Y means error recovery is to be activated and a terminal control user area of 12 bytes is available for interface use. A terminal error occurring in the TOR region will cause error recovery to be invoked in the correct AOR. A value of N means terminal error recovery for MRO environments is not activated.

TCTDSP is the displacement into the TCTUA where the interface's 12 bytes of storage begin for sites running with TCTUA=Y. This is necessary for sites that might already be using a TCTUA. Displacements are relative to zero.

Note: If TCTDSP is set to a value other than zero, then the interface code added to your DFHZNEP will need minor modification. The variable S2KDISP must be set to the same value as TCTDSP.

AOR1 is the VTAM APPLID of your AOR.

AORTR1 is the transaction ID that the TOR DFHZNEP executes when a terminal error occurs. This transaction must be defined in your TOR as a remote resource whose destination is AOR1. This transaction executes as transaction S2KM in the AOR and invokes program S2KMRO.

Sites that have multiple AORs per TOR should specify parameters AOR2, AOR2TR, AOR3 and AOR3TR as described above.

S2KLOG is the extra partition transient data destination where interface statistics are logged. S2KL is the default.

Assemble and Link S2KCUSE

After modifying S2KCUSE to meet your site needs, you must assemble and link it into your SYSTEM 2000 CICS LOAD library. CNTL member JCLCL01 contains the necessary JCL. Review the output and condition codes. S2KCUSE is a resident CICS module, so your CICS must be cycled in order for any changes to be in effect.

Figure 4.2 JCLCL01

```

//JCLCL01 JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
//* MEMBER NAME: JCLCL01
//*
//* CREATED ON: 5 OCT 2004 AT 16:24:54
//*
//* ASSEMBLE AND LINK ASSEMBLY PROGRAMS
//*
//CLTPASM PROC S=NONAME,
// SYSOUT=A,
// WRKUNIT=SYSDA,
// SOURCE='S2K.V2.SOURCE',
// LOAD='S2K.V2.LOAD',
// SYS1MAC='SYS1.MACLIB',
// SYS1MOD='SYS1.MODGEN',
// CICSMAC='CICS.MACLIB'
//*
//* ASSEMBLER
//*
//ASM EXEC PGM=ASMA90,
// PARM=(NODECK,OBJECT)
//SYSLIB DD DSNAME=&CICSMAC,
// DISP=SHR,
// DCB=BLKSIZE=32000
// DD DSNAME=&SYS1MAC,
// DISP=SHR
// DD DSNAME=&SOURCE,
// DISP=SHR
// DD DSNAME=&SYS1MOD,
// DISP=SHR
//SYSUT1 DD UNIT=&WRKUNIT,
// SPACE=(1700,(400,50))
//SYSUT2 DD UNIT=&WRKUNIT,
// SPACE=(1700,(400,50))
//SYSUT3 DD UNIT=&WRKUNIT,
// SPACE=(1700,(400,50))
//SYSPRINT DD SYSOUT=&SYSOUT
//SYSIN DD DSNAME=&SOURCE(&S),
// DISP=SHR
//SYSPUNCH DD DUMMY
//*
//* CPYASPGM
//*
//SYSLIN DD DSNAME=&&ASMOBJ,
// DISP=(NEW,PASS),
// UNIT=&WRKUNIT,
// SPACE=(1700,(1400,50))
//*
//* END CPYASPGM
//*
// IF (ASM.RC LT 8) THEN
//*
//* LINKAGE EDITOR
//*
//LKED EXEC PGM=IEWL,
// PARM=(MAP,LET,LIST,NCAL,'AMODE=31,RMODE=24')
//SYSLIN DD DSNAME=&ASMOBJ,
// DISP=(OLD,DELETE)

```

```
//SYSLIB DD DSN=LOAD,
// DISP=SHR
//SYSLMOD DD DSN=LOAD (&S) ,
// DISP=SHR
//SYSUT1 DD DSN=SYSUT1,
// UNIT=(&WRKUNIT,SEP=(SYSLIN,SYSLMOD)),
// SPACE=(CYL,(5,2),,CONTIG)
//SYSPRINT DD SYSOUT=&SYSOUT
//*
// ENDIF
//*
// PEND END CLTPASM
//*
//ASM1 EXEC CLTPASM,S=S2KCUSE
//
```

Error Recovery Requirements

SYSTEM 2000 software includes code to customize CICS error recovery programs DFHPEP and DFHZNEP. Code to customize the system recovery table DFHSRT is also provided. SYSTEM 2000 customization is required to ensure proper recovery in case of an abend or terminal error.

DFHPEP provides an exit point for error recovery when an application program abends. Source member S2KPEP contains error recovery code for the SYSTEM 2000 interface and is a complete replacement for the IBM default DFHPEP. If you have an existing DFHPEP, then you must incorporate S2KPEP code into your version of DFHPEP. You can use CNTL member JCLPEP to assemble and link DFHPEP.

DFHZNEP provides an exit point for error recovery when a terminal error occurs. Source member S2KZNEP contains error recovery code for the SYSTEM 2000 interface. S2KZNEP has been pretranslated and should be inserted after label NEP0AF in the program DFHZNEPX supplied by IBM. The following statements in S2KZNEP should be moved to follow the LTORG statement in DFHZNEPX :

```
DS2KCUSE
DURBMU *02*
```

Note: If you execute in an MRO environment and have chosen terminal error recovery (S2KCUSE option TCTUA=Y), then you must set variable S2KDISP to the value you chose for S2KCUSE option TCTDSP. No modification is required if TCTUA=0.

Assemble and link DFHZNEP with JCL supplied for your CICS installation. In the assemble step, you must add your SYSTEM 2000 SOURCE library to the SYSLIB concatenation to pick up SYSTEM 2000 macros.

When link editing DFHZNEP you must set the entry point of the resulting load module to DFHZNENA.

Figure 4.3 DFHZNEP

```
//DFHZNEP JOB (JOB CARD)
//*
//*
//ASM EXEC PGM=ASMA90,
// PARM='DECK,NOOBJECT,LIST,XREF(SHORT) '
//SYSLIB DD DSN=S2K.V2.SOURCE,DISP=SHR ==> SYSTEM 2000 SOURCE LIBRARY
// DD DSN=CICS.SDFHMAC,DISP=SHR
// DD DSN=SYS1.MACLIB,DISP=SHR
// DD DSN=SYS1.AMODGEN,DISP=SHR
//SYSUT1 DD UNIT=(SYSDA,SEP=(SYSLIB)),SPACE=(1700,(400,50))
//SYSUT2 DD UNIT=(SYSDA,SEP=(SYSLIB)),SPACE=(1700,(400,50))
```



```

//SYSUT3 DD UNIT=(SYSDA,SEP=(SYSLIB)),SPACE=(1700,(400,50))
//SYSPRINT DD SYSOUT=*
//SYSPUNCH DD DSN=&&TEMPPDS(&MEM.0),
// DISP=(NEW,PASS),
// UNIT=SYSDA,
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=400),
// SPACE=(400,(200,100,5))
//SYSIN DD DSN=YOUR.LIBRARY(&MEM),DISP=SHR
//LKED EXEC PGM=IEWL,PARM='LIST,LET,XREF',
// COND=(5,LT,ASM)
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD UNIT=SYSDA,SPACE=(1024,(200,20))
//SYSLMOD DD DISP=SHR,DSN=S2K.V2.LOAD(&MEM)
//SYSLIB DD DISP=SHR,DSN=CICS.SDFHLOAD
//OBJLIB DD DSN=&&TEMPPDS(&MEM.0),
// DISP=(OLD,PASS),
// VOL=REF=* .ASM.SYSPUNCH
//SYSLIN DD DDNAME=SYSIN
// PEND
//DFHZNEP EXEC CLASML,MEM=DFHZNEP
//LKED.SYSIN DD *
ORDER DFHEAI
ORDER DFHZNEP0
ORDER DFHEAI0
INCLUDE SYSLIB(DFHEAI)
INCLUDE OBJLIB(DFHZNEP0)
INCLUDE SYSLIB(DFHEAI0)
MODE AMODE(31),RMODE(ANY)
ENTRY DFHZNENA
NAME DFHZNEP(R)

```

DFHSRT allows CICS to intercept certain operating system abend codes and attempt recovery. If when installing your Multi-User software you chose Cross Memory Services (XMS) as the method of communication between dependent regions and Multi-User, you will need a CICS system recovery table (DFHSRT). Source member S2KSRT contains the abend codes related to Cross Memory Services and should be added to your DFHSRT. Your SIT must be modified accordingly.

Figure 4.4 Source member S2KSRT

```

DFHSRT TYPE=SYSTEM, *
          ABCODE=(052,053,0D4,0D5,0D6,0D7,0D8, *
          0D9,0DA,0DB,0DC,0DE,0DF,0E2), *
          RECOVER=YES

```

In addition to providing automatic STOP S2K processing, PLXTRUE also attempts to clean up users left in the interface at CICS shutdown time. PLXTRUE links to programs S2KTERM and S2KADRC to facilitate this cleanup. Sites that run with an external security manager on their CEMT transaction need to take the following steps to avoid security violations that might occur when PLXTRUE links to other programs:

1. Ensure that the userid that terminated CICS has access to programs S2KTERM and S2KADRC. PLXTRUE executes under the authority of this userid.
2. As an alternative, you can change the resource security option for the CEMT transaction to RESSEC=NO. This should not present a problem for most sites, because use of CEMT is most often restricted to privileged users in a production environment.

CICS Resource Requirements

The CICS interface requires additions to several CICS tables. The programs, transactions, and file additions are provided in source member S2KCSD. Destination additions are provided in source member S2KDCT.

CNTL member JCLCSDU provides sample JCL to update your DFHCSD file with the required SYSTEM 2000 entries from S2KCSD. JCLCSDU creates group S2KV2. You must add S2KV2 to your group list as specified by the GRPLIST parameter in your CICS startup job. If you plan to install the QueX software, you can concatenate member CSDQUEX at this time.

Note: If you execute in an MRO environment and have chosen terminal error recovery (S2KCUSE option TCTUA=Y), you must have transaction definitions in the TOR for each transaction indicated by S2KCUSE options AOR1TR, AOR2TR, and AOR3TR.

The following is the TOR transaction definition:

```
DEFINE TRANSACTION(aor1tr) REMOTESYSTEM(target aor1) REMOTENAME(S2KM)
```

Figure 4.5 JCLCSDU

```
//JCLCSDU JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
//* MEMBER NAME: JCLCSDU
//*
//* CREATED ON: 5 OCT 2004 AT 16:25:01
//*
//* THIS JOB UPDATES THE CSD WITH THE PROPER ENTRIES.
//*
//CSDUPDT EXEC PGM=DFHCSDUP
//STEPLIB DD DSN=DSNAME=CICS.LOADLIB,
// DISP=SHR
//DFHCSD DD DSN=DSNAME='YOURCSD', PUT YOUR CSD FILE DSN HERE
// DISP=SHR
//SYSUT1 DD UNIT=SYSDA,
// SPACE=(1024,(100,100))
//SYSPRINT DD SYSOUT=A
//SYSIN DD DSN=DSNAME=S2K.V2.SOURCE(S2KCSD),
// DISP=SHR
```

Figure 4.6 S2KCSD

```
*****
* THE FOLLOWING DEFINITIONS ARE TO BE INCLUDED AS *
* INPUT TO AN EXECUTION OF THE DFHCSDUP PROGRAM. *
*****
*****
*
* SYSTEM 2000 REQUIRED TRANSACTIONS *
*
*****
DEFINE TRANSACTION(S2KL) PROGRAM(S2KLOG) GROUP(S2KV2)
DEFINE TRANSACTION(LALL) PROGRAM(S2KLIST) GROUP(S2KV2)
DEFINE TRANSACTION(LPLX) PROGRAM(S2KLIST) GROUP(S2KV2)
DEFINE TRANSACTION(LSCF) PROGRAM(S2KLIST) GROUP(S2KV2)
DEFINE TRANSACTION(S2KM) PROGRAM(S2KMRO) GROUP(S2KV2)
```

```

DEFINE TRANSACTION (SCFZ) PROGRAM (S2KTERM) GROUP (S2KV2)
DEFINE TRANSACTION (TALL) PROGRAM (S2KTERM) GROUP (S2KV2)
DEFINE TRANSACTION (TPLX) PROGRAM (S2KTERM) GROUP (S2KV2)
DEFINE TRANSACTION (TSCF) PROGRAM (S2KTERM) GROUP (S2KV2)
DEFINE TRANSACTION (S2KE) PROGRAM (S2KEDTRT) GROUP (S2KV2)
DEFINE TRANSACTION (S2KK) PROGRAM (S2KPFKY) GROUP (S2KV2)
DEFINE TRANSACTION (S2KU) PROGRAM (SCFDRVR) GROUP (S2KV2)
DEFINE TRANSACTION (S2OP) PROGRAM (SCFDRVR) GROUP (S2KV2)
DEFINE TRANSACTION (S2VA) PROGRAM (ASMCCCL) GROUP (S2KV2)
DEFINE TRANSACTION (S2VC) PROGRAM (COBCCCL) GROUP (S2KV2)
DEFINE TRANSACTION (S2VP) PROGRAM (PL1CCL) GROUP (S2KV2)
DEFINE TRANSACTION (UDMP) PROGRAM (CLUDUMP) GROUP (S2KV2)
DEFINE TRANSACTION (S2KT) PROGRAM (S2KWEBTO) GROUP (S2KV2)
*****
*
* SYSTEM 2000 REQUIRED PROGRAMS
*
*****
*
* VALIDATION PROGRAMS
*
DEFINE PROGRAM (ASMCCCL) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (COBCCCL) GROUP (S2KV2) LANGUAGE (COBOL)
DEFINE PROGRAM (PL1CCL) GROUP (S2KV2) LANGUAGE (PLI)
*
* SCF PROGRAMS
*
DEFINE PROGRAM (SCFDRVR) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (SCFERROR) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (SCFINTF) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (SCFPGBD) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (SCFPGMG) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (S2KTERM) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
EXECKEY (CICS)
*
* PLEX PROGRAMS
*
DEFINE PROGRAM (PLXFRMT) GROUP (S2KV2) LANGUAGE (ASSEMBLER) RES (YES)
DEFINE PROGRAM (PLXINIT) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (PLXTRUE) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
EXECKEY (CICS)
DESCRIPTION (PLEX TASK RELATED USER EXIT)
DEFINE PROGRAM (S2KMRO) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DESCRIPTION (MRO CLEANUP PROGRAM)
DEFINE PROGRAM (S2KLOG) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DESCRIPTION (LOGGING PROGRAM)
*
* COMMON PROGRAMS
*
DEFINE PROGRAM (CLUDUMP) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (S2KADRC) GROUP (S2KV2) LANGUAGE (ASSEMBLER) RES (YES)
EXECKEY (CICS)
DEFINE PROGRAM (S2KCUSE) GROUP (S2KV2) LANGUAGE (ASSEMBLER) RES (YES)
DEFINE PROGRAM (S2KLIST) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (S2KPFKY) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
*
* COMMAND EDITOR PROGRAMS
*
DEFINE PROGRAM (CONVERT) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (EDJRNL) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (GETNXLEX) GROUP (S2KV2) LANGUAGE (ASSEMBLER)
DEFINE PROGRAM (IOAID) GROUP (S2KV2) LANGUAGE (ASSEMBLER)

```

```

DEFINE PROGRAM(IOCTRL)      GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(IOMEMBR)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(OUTBLD)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(SETMODE)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KDLT)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KDSPL)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KEDTRT)   GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KEND)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KEPROC)   GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KERR)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KFIND)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KGET)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KINS)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KLISTD)   GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KMDFY)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KPTR)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KSAVE)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KSBMT)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KSCR)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KSEND)    GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(S2KSETPF)   GROUP(S2KV2) LANGUAGE(ASSEMBLER)
DEFINE PROGRAM(USERID)     GROUP(S2KV2) LANGUAGE(ASSEMBLER)
*****
*
*   SYSTEM 2000 REQUIRED FILES
*
*****
  DEFINE FILE(S2KCOM) RECORDSIZE(30) BROWSE(YES) GROUP(S2KV2)
  DEFINE FILE(S2KLIB) RECORDFORMAT(V) GROUP(S2KV2)
    ADD(YES) BROWSE(YES) DELETE(YES) READ(YES) UPDATE(YES)
*****
*
*   ADD GROUP(S2KV2) TO YOUR MAIN GRPLIST
*
*****
  ADD GROUP(S2KV2) LIST(GRPLIST)

```

DCT Requirements

Member S2KDCT on the SOURCE library contains entries that are required for SYSTEM 2000 logging and for execution of the SUBMIT command. Modifications to your CICS JCL are required. See the following section, “CICS JCL Requirements.”

Figure 4.7 S2KDCT

```

JESRDR  DFHDCT  TYPE=SDSCI, DSCNAME=JESRDR, TYPEFLE=OUTPUT,      +
          RECFORM=VARUNB, BLKSIZE=88, RECSIZE=84, BUFNO=1
*
S2KLOG  DFHDCT  TYPE=SDSCI,          SYSTEM 2000 LOGGING      +
          DSCNAME=S2KLOG,          +
          BLKSIZE=136,             +
          RECSIZE=132,             +
          RECFORM=VARUNB,          +
          TYPEFLE=OUTPUT,          +
          BUFNO=1

```

```

*
MJCL      DFHDCT TYPE=EXTRA, DESTID=MJCL, DSCNAME=JESRDR
*
S2KL      DFHDCT TYPE=EXTRA,          SYSTEM 2000 LOG          +
          DESTID=S2KL,                +
          DSCNAME=S2KLOG

```

CICS JCL Requirements

1. Add the SYSTEM 2000 library S2K.V2.LOAD to your DFHRPL concatenation.
2. Add DD statements for the S2KLIB and S2KCOM files. S2KCOM is required only if you are running XMS Multi-User.
3. Add DD statements for transient data destinations S2KLOG and JESRDR.

Figure 4.8 CICS JCL Statements

```

//*          S2K INTERFACE LOAD LIBRARY TO BE
//*          CONCATENATED WITH DFHRPL DD STATEMENTS
//          DD  DSN=S2K.V2.LOAD, DISP=SHR
//*
//*          S2KCOM FOR XMS COMMUNICATION TO MULTI-USER
//S2KCOM    DD  DSN=S2K.V2.COM, DISP=SHR
//*
//*          S2K EDITOR AND PFKEYS FILE TO BE INCLUDED
//*          IN CICS JCL
//S2KLIB    DD  DSN=S2K.CICS.S2KLIB, DISP=OLD
//*
//*          S2KLOG IS A TRANSIENT DATA DESTINATION
//*          TO RECORD ERROR CONDITIONS WITHIN THE
//*          S2K CICS INTERFACE
//S2KLOG    DD  SYSOUT=A
//*
//*          JESRDR IS USED BY THE COMMAND EDITOR
//*          FEATURE (S2KE) TO SUBMIT JCL TO THE
//*          INTERNAL JES READER
//JESRDR    DD  SYSOUT=(A, INTRDR)

```

Create the S2KLIB File

CNTL member JCLVSAM defines the S2KLIB VSAM file required by the Command Editor. See the *SYSTEM 2000 Software: CICS Interface Manual* for a detailed description of the Command Editor. Command Editor files for Release 12.1 are upward compatible with Version 1 and 2 and need not be redefined.

The S2KLIB VSAM file is also used to maintain PF key modifications based on the userid or terminal ID. See the S2KK transaction in the *SYSTEM 2000 Software: CICS Interface Manual*.

Figure 4.9 JCLVSAM

```

//JCLVSAM JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
//* MEMBER NAME: JCLVSAM
//*
//* CREATED ON: 5 OCT 2004 AT 16:25:03
//*
//*****
//*
//* ALLOCATE CICS COMMAND EDITOR AND
//* PF KEY DEFINITION VSAM FILE
//*
//*****
//*
//VSAM PROC SYSOUT=A
//IDCAMS EXEC PGM=IDCAMS
//SYSUDUMP DD SYSOUT=&SYSOUT
//SYSPRINT DD SYSOUT=&SYSOUT
//*
// PEND END VSAM
//*
//S2KLIB EXEC VSAM
//SYSIN DD *
DEFINE CLUSTER -
    (NAME(S2K.CICS.S2KLIB) -
    VOLUMES(DISK01) -
    RECORDSIZE(2000 19000) -
    REUSE -
    CYLINDERS(5 0) -
    KEYS(12 0) -
    FREESPACE(20 20) -
    SHR(3 3) )
/*
/*
//REPRO EXEC VSAM
//DUMMREC DD *
DUMMY
//SYSIN DD *
    REPRO-
    INFILE(DUMMREC) -
    OUTDATASET(S2K.CICS.S2KLIB)
/*

```

Chapter 5: QueX Installation

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Run JCLALCAT to Create the QueX User View Database.....	27
Add Changes for QueX Execution Under CICS	29

Run JCLQXZAP to Zap the Multi-User SVC Number

Member JCLQXZAP, shown in Figure 5.1, zaps the appropriate Multi-User SVC number in CSECT SVCADR of module QUVBPGM. If you have not installed Multi-User software yet, you can run this job later.

Figure 5.1 JCLQXZAP

```
//JCLQXZAP JOB (ACCT,ACCT2),
//  'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLQXZAP
/*
/** CREATED ON:  5 OCT 2004 AT 16:25:05
/**
/******
/** APPLY ZAP FOR MULTI-USER SVC NUMBER
/******
/**
//ZAPSVC EXEC PGM=IMASPZAP,
//          PARM='IGNIDRFULL'
//SYSPRINT DD SYSOUT=A
//SYSLIB   DD DSNAME=S2K.V2.LOAD,
//          DISP=SHR
/**
/******
/** APPLY ZAP FOR MULTI-USER SVC NUMBER
/******
/**
//SYSIN    DD *
*
* ZAP CARDS FOR XMS SYSTEM 2000 MULTI-USER
*
NAME QUVBPGM SVCADR
REP 0008 0701,0701
/*
//
```

Run JCLALCAT to Create the QueX User View Database

Member JCLALCAT (Figure 5.2) defines the QueX User View database QUEXCATALOG and loads validation user view UVDEMO into it.

Note: The database name for the QueX User View database must be QUEXCATALOG, and the database password must be QUEX.

Figure 5.2 JCLALCAT

```

//JCLALCAT JOB (ACCT,ACCT2),
//  'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
//* MEMBER NAME: JCLALCAT
//*
//* CREATED ON:  5 OCT 2004 AT 16:25:04
//*
//*****
//* CREATE QUEXCATALOG DATA BASE
//*****
//*
//S2KPROC PROC SYSOUT=A,
//          PARM=NLPARM,
//          LOAD='S2K.V2.LOAD',
//          SOURCE='S2K.V2.SOURCE'
//GO      EXEC PGM=SYS2K
//STEPLIB DD DSNAME=&LOAD,
//          DISP=SHR
//SYSUDUMP DD SYSOUT=&SYSOUT
//*
//* CPYPARMD
//*
//S2KPARMS DD DSNAME=S2K.V2.CNTL(&PARMS),
//          DISP=SHR
//*
//* END CPYPARMD
//*
//CATDEFIN DD DSNAME=&SOURCE.(CATDEFIN),
//          DISP=SHR
//CATDATA  DD DSNAME=&SOURCE.(CATDATA),
//          DISP=SHR
//          PEND
//*
//*****
//* CREATE QUEXCATALOG DATA BASE
//*****
//CAT1     EXEC S2KPROC
//S2KCOMD  DD *
USER,QUEX:
ALLOC QUEXCATALOG,
        FILES=ALL,
        VOL=DISK01,
        DISP=NEW:
IF ERROR THEN
        DBN IS QUEXCATALOG:
        CONTROL:
        RELEASE:
ENDIF:
EXIT:
//CAT2     EXEC S2KPROC
//S2KCOMD  DD *
USER,QUEX:
NDB IS QUEXCATALOG:
COMMAND FILE IS CATDEFIN:
CONTROL:
SEPARATOR IS @:
ACCESS:
DATA FILE IS CATDATA:
LOAD:
CONTROL:

```



```

SEPARATOR IS *:
ACCESS:
TALLY C11:
CONTROL:
ENABLE ROLLBACK:
SAVE DATA BASE ON DISK01:
EXIT:
/*
//

```

Add Changes for QueX Execution Under CICS

QueX software under CICS communicates with the SYSTEM 2000 Multi-User software only. This means that the QUEXCATALOG database that contains the user views and any databases the QueX software accesses must be accessible through your SYSTEM 2000 Multi-User environment.

User views that will be used with the QueX software under CICS must be built with the QueX software under TSO.

Job JCLCSDU provides sample JCL to update your DFHCSD file with the entries for the SYSTEM 2000 CICS interface. Edit the job to replace YOURCSD with the data set name of your DFHCSD file and replace (S2KCSD) with (CSDQUEX) on the SYSIN statement.

Job JCLCSDU creates a group (S2KQUEX) on your CSD. You need to add this group to your group list, as specified in the GRPLIST parameter in your CICS startup job. To do so, either use the CEDA transaction online or add the following statement to the end of CSDQUEX:

```
ADD GROUP(S2KQUEX) LIST(YOURLIST)
```

After you log on to CICS, enter the transaction QUEX. From this point, QueX executes the same way it does under TSO.

Chapter 6: Base Validation

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Validate PLEX	32

Successful completion of the validation tests assures that SYSTEM 2000 software is properly installed. The VALID library contains verified output from previous executions of the tests. To compare your output with the contents of the members on the VALID library, use job JCLVALID on the CNTL library to print the members.

Validate the Self-Contained Facility

The Self-Contained Facility (SCF) and Report Writer are tested using prepared command files to issue commands. Member JCLSCF on the CNTL library contains the job stream to execute the tests. The job steps must execute in the order given because each step relies on a preceding one to supply the database in a known condition. Job JCLSCF is shown in Figure 6.1.

Figure 6.1 JCLSCF

```
//JCLSCF JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLSCF
/*
/* CREATED ON: 5 OCT 2004 AT 16:24:12
/*
/******
/* SELF-CONTAINED FACILITY AND REPORT WRITER VALIDATION
/******
/*
/*
/* CPYPARMP
/*
//S2KPROC PROC PARM=NLPARM
/*
/* END CPYPARMP
/*
//GO EXEC PGM=SYS2K
//STEPLIB DD DSNAME=S2K.V2.LOAD,
// DISP=SHR
//SYSUDUMP DD SYSOUT=A
/*
/* CPYPARMD
/*
//S2KPARMS DD DSNAME=S2K.V2.CNTL(&PARMS),
// DISP=SHR
/*
/* END CPYPARMD
/*
//LIBDEFN DD DSNAME=S2K.V2.SOURCE(LIBDEFN),
// DISP=SHR
//LIBLDER DD DSNAME=S2K.V2.SOURCE(LIBLDER),
// DISP=SHR
//TESTRW1 DD DSNAME=S2K.V2.SOURCE(TESTRW1),
// DISP=SHR
/*
```

```
// PEND      END S2KPROC

/*
/*****
/* TEST SELF-CONTAINED FACILITY
/*****
/*
//SCF1      EXEC S2KPROC
//S2KCOMD   DD *
USER,LIB:
ALLOC LIBRARY,
        FILES=ALL,
        VOL=DISK01,
        DISP=NEW:
IF ERROR THEN
        DBN IS LIBRARY:
        CONTROL:
        RELEASE:
ENDIF:
EXIT:
/*
//SCF2      EXEC S2KPROC
//S2KCOMD   DD *
USER,LIB:
NDB IS LIBRARY:
COMMAND FILE IS LIBDEFN:
CONTROL:
ENABLE ROLLBACK:
CONTROL:
SAVE DATA BASE ON DISK01:
EXIT:
/*
/*****
/* TEST REPORT WRITER
/*****
/*
//RW1      EXEC S2KPROC
//S2KCOMD   DD *
USER,LIB:
DBN IS LIBRARY:
CONTROL:
RELEASE:
EXIT:
/*
//RW2      EXEC S2KPROC
//S2KCOMD   DD *
USER,LIB:
RESTORE LIBRARY:
ACCESS:
COMMAND FILE IS TESTRW1:
EXIT:
/*
//
```

Validate PLEX

The CNTL library contains the PLEX validation program source for each programming language supported by SYSTEM 2000 software. Members JCLASM, JCLCOB, JCLFORT, and JCLPL1 contain the jobs to test execution of each language. Only the programming languages to be used with SYSTEM 2000 software at your site need to be tested.

Chapter 7: Multi-User Validation

Initialize Multi-User and Run Validation Tests	33
Issue Console Operator Commands	33
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Successful completion of the validation tests ensures that the Multi-User software is properly installed. The results from the Multi-User validation tests should be the same as from the base SYSTEM 2000 software test, because the tests are the same.

Verify that the database files for the LIBRARY and PUBLISHERS databases are still allocated.

Initialize Multi-User and Run Validation Tests

Multi-User validation requires execution of two jobs, JCLMU and JCLMUDEP. Job JCLMU executes Multi-User. When the following message appears at the operator console, you are ready to submit job JCLMUDEP:

```
'S2K1117/01- MULTI-USER INITIALIZATION PHASE COMPLETE'
```

Job JCLMUDEP re-executes the base SYSTEM 2000 software validation tests in a Multi-User environment. It must use an initiator other than the one in which the Multi-User main task is running. Job JCLMU is shown in Figure 7.1, and job JCLMUDEP is shown in Figure 7.2.

Issue Console Operator Commands

During Multi-User execution, any of the SYSTEM 2000 Multi-User operator commands can be issued. For example, you can issue the following commands:

F <job name>,D A,S displays all active tasks and their status.

F <job name>,C S2K terminates Multi-User when all active tasks are complete.

See the *SYSTEM 2000 Software: Product Support Manual* for complete information on the console operator commands.

The operator must not cancel any user job or the Multi-User main task with an OS CANCEL unless a problem prevents canceling through Multi-User. When validation is complete, use Multi-User termination commands to ensure that all dependent region jobs are notified that Multi-User is coming down and to prevent user or test databases from being damaged. Shut down Multi-User from an OS console using a Multi-User operator command, such as CANCEL S2K.

Figure 7.1 JCLMU

```

//JCLMU JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLMU
/*
/* CREATED ON: 5 OCT 2004 AT 16:24:36
/*
/*****
/* INITIATE MULTI-USER MAIN TASK
/*****
/*
//MUMAIN PROC SYSOUT=A
//S2K EXEC PGM=S2KCMC,
// REGION=0M
//STEPLIB DD DSNAME=S2K.V2.AUTH,
// DISP=SHR
//S2KLOAD DD DSNAME=S2K.V2.LOAD,
// DISP=SHR
//S2KCOM DD DSNAME=S2K.V2.COM,
// DISP=SHR
//S2KPARMS DD DSNAME=S2K.V2.CNTL(MUPARM),
// DISP=SHR
//S2KDIAG DD SYSOUT=&SYSOUT
//SYSOUT DD SYSOUT=&SYSOUT
//SYSUDUMP DD SYSOUT=&SYSOUT
/*
/*****
/* FILES FOR MULTI-USER ACCOUNTING LOG
/*****
/*
//S2KMANX DD DSNAME=S2K.V2.ACCOUNT.MANX,
// DISP=SHR
//S2KMANY DD DSNAME=S2K.V2.ACCOUNT.MANY,
// DISP=SHR
/*
// PEND END MUMAIN
/*
/*****
/* INITIATE MULTI-USER MAIN TASK
/*****
/*
//MULTIUSR EXEC MUMAIN
/*

```

Figure 7.2 JCLMUDEP

```

//JCLMUDEP JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLMUDEP
/*
/* CREATED ON: 5 OCT 2004 AT 16:24:37
/*
/*****
/* VALIDATE EXECUTION UNDER MULTI-USER
/*****
/*
//MUTEST PROC SYSOUT=A
//TSTSTEP EXEC PGM=SYS2KJOB
//STEPLIB DD DSNAME=S2K.V2.LOAD,

```

```

//          DISP=SHR
//*
/* CPYXMS
/*
//S2KCOM    DD DSNAME=S2K.V2.COM,
//          DISP=SHR
/*
/* END CPYXMS
/*
//SYSUDUMP  DD SYSOUT=&SYSOUT
//S2KCOMD   DD DDNAME=SYSIN
//LIBDEFN   DD DSNAME=S2K.V2.SOURCE(LIBDEFN),
//          DISP=SHR
//LIBLDER   DD DSNAME=S2K.V2.SOURCE(LIBLDER),
//          DISP=SHR
//TESTRW1   DD DSNAME=S2K.V2.SOURCE(TESTRW1),
//          DISP=SHR
/*
// PEND     END MUTEST
/*
/*****
/* SELF-CONTAINED FACILITY VALIDATION
/*****
/*
//LIBREL   EXEC MUTEST
//SYSIN    DD *
USER,LIB:
EXCLUSIVE DATA BASE NAME IS LIBRARY:
CONTROL:
RELEASE:
EXIT:
/*
//LIBBLD   EXEC MUTEST
//SYSIN    DD *
USER,LIB:
NDB IS LIBRARY:
COMMAND FILE IS LIBDEFN:
CONTROL:
ENABLE ROLLBACK:
SAVE DATA BASE:
EXIT:
/*
/*****
/* REPORT WRITER VALIDATION
/*****
/*
//LIBREL2  EXEC MUTEST
//SYSIN    DD *
USER,LIB:
EXCLUSIVE DATA BASE NAME IS LIBRARY:
CONTROL:
RELEASE:
EXIT:
/*
//LIBRPT   EXEC MUTEST
//SYSIN    DD *
USER,LIB:
RESTORE LIBRARY:
COMMAND FILE IS TESTRW1:
EXIT:
/*
//

```

Validate PLEX

Job JCLMUPLX is provided to validate COBOL, Assembler, FORTRAN, and PL/I. Jobs JCLASM, JCLCOB, JCLFORT, and JCLPL1 must have been run during single-user validation to create the programs used in JCLMUPLX.

Chapter 8: CICS Validation

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Validate Automatic STOP S2K Processing	37
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CICS Validation

Post-installation validation concentrates on three areas: PLEX, automatic STOP S2K processing, and error recovery. Several tests are provided to validate a successful installation. Each of these tests can be executed in assembler, COBOL, or PL/I. Choose the transaction for the language your site uses.

S2VA (assembler) S2VC (COBOL) S2VP (PL/I)

The Multi-User Diagnostic Log can be used to determine whether installation is successful. Set the Multi-User Diagnostic LOGLEVEL to USEGM.

Validate PLEX

To verify that PLEX executes correctly and that the proper SVC has been specified for communication with SYSTEM 2000 Multi-User software, do the following:

Follow the validation transaction with the four-character test code BOOK and a book title from the LIBRARY database, such as, HOUND OF THE BASKERVILLES.

Example: **S2VCBOOKHOUND OF THE BASKERVILLES**

The results are valid library database values.

(AUTHOR NAME)	(BOOK TITLE)	(SUBJECT)
DOYLE	HOUND OF THE BASKERVILLES	FICTION

JCL is provided to precompile, translate, compile, and link the three languages. JCLCL02 is used for COBOL II, JCLCL03 is used for PL/I, and JCLCL04 is used for assembler language.

Validate Automatic STOP S2K Processing

Automatic STOP S2K processing is controlled by the S2KCUSE options DOSTOP and CHKTRNS. Module S2KCUSE resides in your CICS interface SOURCE library and can be modified to reflect your site needs. The following validation tests can be executed to validate the various combinations of DOSTOP and CHKTRNS.

Automatic Stop S2K Processing Turned Off—DOSTOP=N

To verify that automatic STOP S2K processing is turned off, enter the following:

```
S2VCKCPX
```

A successful completion of the transaction is indicated by the following message:

```
"-AUTOMATIC STOP S2K PROCESSING VALIDATION COMPLETED-"
```

The Multi-User Diagnostic Log should show only the command START S2K.

Automatic Stop S2K Processing Turned On—DOSTOP=Y

To verify that automatic STOP S2K processing is functioning properly, two tests are required, one for normal transactions, and one for pseudo-conversational transactions.

Test 1: Enter the following:

```
S2VCKCPX
```

A successful completion of the transaction is indicated by the following message:

```
"-AUTOMATIC STOP S2K PROCESSING VALIDATION COMPLETED-"
```

The Multi-User Diagnostic Log should show these commands: START S2K, STOP S2K, and a 0013 terminate message.

Test 2: To verify that pseudo-conversational transactions are not eligible for automatic STOP S2K processing (CHKTRNS = Y), enter the following:

```
S2VCCHKT
```

A successful completion of the transaction is indicated by the following message:

```
"NEXT TRANSID CHECK VALIDATION COMPLETED, PLEASE PRESS ENTER KEY-"
```

The Multi-User Diagnostic Log should show only the command START S2K.

To continue the pseudo-conversational series, press the ENTER key.

The USER STATUS DISPLAY screen should be displayed, and your terminal ID should be reflected in the USER-ID column.

USER STATUS DISPLAY		PAGE 01			
USER-ID	STATUS	TYPE	OPCODE	RESPONSE	FLAG1
0223	ACTIVE	PLEX	I/O COMP	NORM COMP	*NOT SET*

The Multi-User Diagnostic Log should now show the STOP S2K command and the 0013 terminate message.

Validate Error Recovery

To verify that your DFHPEP is functioning properly, enter the following:

```
S2VCPEPX
```

The transaction will abend with the abend code PEPX. The Multi-User Diagnostic Log should show the command START S2K and an 0013 terminate message.

To verify that your DFHZNEP is functioning properly, enter the following:

```
S2VCTORX
```

From another terminal, use the CICS master terminal transaction CEMT to release your terminal. This will cause DFHZNEP to gain control and perform error recovery processing.

The Multi-User Diagnostic Log should show the command START S2K and an 0013 terminate message.

If you run in an MRO environment with the S2KCUSE option TCTUA=Y, then repeat the previous test in the TOR region. Transaction S2VC must be defined to execute in the AOR.

Chapter 9: QueX Validation

Make sure that the QueX User View database, QUEXCATALOG, contains the initial user view named UVDEMO. Then, to validate the QueX software, follow the tutorial in the *QueX User's Guide*.

Chapter 10: SYSTEM 2000 Maintenance

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This chapter contains descriptions of jobs that are not required during installation but might be useful or required later. There are jobs for each of the four products: the base, Multi-User, CICS interface, and QueX software. Several of these jobs are more fully documented in other SYSTEM 2000 manuals, which are referenced.

Base SYSTEM 2000 Software

Relink SYS2K

Job JCLS2KLN (Figure 10.1) relinks executable module SYS2K. You run this job if you want to include user exits or remove them from your system.

Figure 10.1 JCLS2KLN

```
//JCLS2KLN JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLS2KLN
/*
/** CREATED ON: 5 OCT 2004 AT 16:24:14
/**
/******
/* RELINK EXECUTABLE MODULE SYS2K
/******
/**
//S2KLINK PROC SYSOUT=A,
// WRKUNIT=SYSDA
/*
/** LINK SYSTEM 2000
/**
//LKED EXEC PGM=IEWL,
// PARM=(MAP,XREF,LET,LIST,NCAL,'SIZE=(256K,64K)',
// 'AMODE=31','RMODE=ANY')
//SYSLMOD DD DSNAME=S2K.V2.LOAD(&LNAME),
// DISP=SHR
//SYSLIN DD DDNAME=SYSIN
//LOAD DD DSNAME=S2K.V2.LOAD,
// DISP=SHR
//SYSPRINT DD SYSOUT=&SYSOUT
//SYSUT1 DD UNIT=&WRKUNIT,
// SPACE=(1024,(400,20))
/*
// PEND END S2KLINK
/*
/******
/* RELINK EXECUTABLE MODULE SYS2K WITH S2EXIT
/******
/**
//LINKS2K EXEC S2KLINK,
```

```
//          LNAME=SYS2K
//SYSIN    DD *
REPLACE S2EXIT
INCLUDE LOAD(SYS2K)
INCLUDE LOAD(S2EXIT)
ENTRY S2K
NAME SYS2K(R)
//*
/*****
/* RELINK EXECUTABLE MODULE SYS2K WITHOUT S2EXIT
/*****
/*
/* TO DELETE S2EXIT FROM SYS2K, REMOVE THE INCLUDE STAT
/* FOR S2EXIT.          THE NCAL PARAMETER IS NECESSARY TO PREV
/* S2EXIT FROM BEING AUTOMATICALLY INCLUDED.
/*
```

Unload FFD Media

Job JCLFFDI provides sample JCL to unload field fix distribution (FFD) mailer media, which SYSTEM 2000 Technical Support periodically sends to its customers. The first file on the media is always a PDS, which contains all of the fixes and JCL to apply them. Sometimes FFDs contain replacement load modules on a second file. This job provides sample JCL to unload future field fix distributions. When preparing this JCL, follow the instructions in the letter that accompanies the field fix distribution media.

Run S2KSETI to Authorize SYSTEM 2000 Software

S2KSETI is an independent utility that you run against your SYSTEM 2000 LOAD library to authorize the SAS Institute Program Products at your installation. You also run the utility to renew authorization. Under normal circumstances, all media that contain the base SYSTEM 2000 software are pre-authorized, and you do not need to run S2KSETI. You will need to run it later if you license additional software, if your CPU serial number changes, and at annual renewal time.

The procedures for new authorization and renewal authorization are the same. Before your SAS license expires, you are invoiced for the renewal fee. When SAS receives the renewal fee, you are mailed parameter values that must be used to authorize SYSTEM 2000 software for the renewal period. The source text members SETBTEXT, SETMTEXT, SETCTEXT, and SETQTEXT must be edited to supply the renewal information for each product. You must code the values in these members exactly as they are provided in order for the program to execute properly.

Executable module S2KSETI is provided on the LOAD library, and job JCLSET (Figure 10.2) runs the program.

Figure 10.2 JCLSET

```
//JCLSET    JOB (ACCT,ACCT2),
//  'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
/* MEMBER NAME: JCLSET
/*
/* CREATED ON:   5 OCT 2004 AT 16:24:13
/*
/*****
/* AUTHORIZE SAS INSTITUTE PROGRAM PRODUCTS
/* STEPS:
/* 1.  MODIFY MEMBER SET?TEXT IN SOURCE LIBRARY
/*     WITH YOUR UPDATED PARAMETERS
/*     ? = B FOR BASE PRODUCT
```



```

/**      ? = M FOR MULTI-USER PRODUCT
/**      ? = C FOR CICS INTERFACE PRODUCT
/**      ? = Q FOR QUEX PRODUCT
/**      2. COMMENT OUT EXEC STEP FOR PRODUCT
/**      YOU DO NOT HAVE
/**      3. EXECUTE THIS JOB.
/**
/*******
/**
/**SETI    PROC  PRODUCT=B,
/**          SET=SET,
/**          SYSOUT=A
/**STEP    EXEC  PGM=S2KSETI,
/**          PARM='SRCLIB'
/**STEPLIB DD  DSNAME=S2K.V2.LOAD,
/**          DISP=SHR
/**SRCLIB  DD  DSNAME=S2K.V2.LOAD,
/**          DISP=SHR
/**SYSPRINT DD  SYSOUT=&SYSOUT
/**SYSUDUMP DD  SYSOUT=&SYSOUT
/**SYSIN   DD  DSNAME=S2K.V2.SOURCE(&SET.&PRODUCT.TEXT),
/**          DISP=SHR
/**
/** PEND          END SETI
/**
/**BASE    EXEC  SETI,
/**          PRODUCT=B    FOR BASE
/**MUP     EXEC  SETI,
/**          PRODUCT=M    FOR MULTI-USER
/**CICS    EXEC  SETI,
/**          PRODUCT=C    FOR CICS INTERFACE
/**QUEX    EXEC  SETI,
/**          PRODUCT=Q    FOR QUEX

```

You can replace PARM='SRCLIB' with PARM='DISPLAY' to display your current renewal information.

S2KGLOAD and S2KGUNLD Program Generators

The UNLOAD and LOAD program generator programs are supplied in the V2 SOURCE library. The following jobs are in your CNTL library after you expand the S2KIVJCL installation macro. The program generators are documented in the *SYSTEM 2000 Software: Product Support Manual*.

JCLGCBGO	executes the generated COBOL programs.
JCLGCOB	precompiles, compiles, and links the generated COBOL programs.
JCLGDEF	defines a new database.
JCLGDESC	creates a DESCRIBE file and a database definition file.
JCLGENCB	executes PL/I programs to generate the COBOL programs.
JCLGPL1	compiles and links PL/I programs.

Create EMPLOYEE and PERSONNEL Databases

The EMPLOYEE database is used for examples in SYSTEM 2000 publications, for SAS training classes, and in QueX validation. Job JCLEMP creates this database. When JCLEMP is run as supplied, the EMPLOYEE database is created with definition and database cycle numbers of 3 and 1, respectively. To ensure that your output matches the examples in the publications and training class lab sessions, be sure the definition number and database cycle number are at 3 and 1 before you save the database.

The PERSONNEL database is used for examples in basic SYSTEM 2000 software publications and can also be used for certain training classes. Job JCLPERS creates the PERSONNEL database.

Other Maintenance Jobs

The following are descriptions of four members in the SYSTEM 2000 CNTL library: JCLDEL, JCLALLOC, JCLDUMP, and JCLCNVRT. These jobs are not required installation steps, and under normal circumstances they are not needed during initial installation of the base software.

Delete Database Files

Job JCLDEL deletes the database files and the disk Savefile for the EMPLOYEE database. Run this job when you are going to recreate a database and want to reallocate the database files. Be sure to supply the appropriate DBNAME parameter(s) before you submit the job.

Allocate Database Files

Job JCLALLOC catalogs database Files 1 through 8 and the disk Savefile for the SYSTEM 2000 databases. Be sure to supply the appropriate DBNAME parameter(s) before you submit the job.

Dump Pages of a Database File

For debugging purposes, Technical Support might request a dump of certain pages of a SYSTEM 2000 database file. Job JCLDUMP provides sample JCL to do this.

Convert Databases to Version 2 Format

Databases created before Version 2 must be rebuilt in the Version 2 format. This can be done either with the UNLOAD/LOAD program generators or with the conversion program CVRTV2. Use of both methods is documented in the *SYSTEM 2000 Software: Product Support Manual*. Job JCLCVRT contains sample JCL to convert a database using CVRTV2.

Multi-User Software

JCL for the Diagnostic Log

Members JCLDIAG and JCLDIAGX in the CNTL library are described below. These jobs are not required installation steps and are not needed during initial installation of the Multi-User software.

JCL to run the SYSTEM 2000 DIAG2000 program

The Diagnostic Log (file S2KDIAG) provides records of events that occur during a Multi-User session. DIAG2000 is a utility that organizes this information into detailed and summary reports. Complete descriptions of these reports and how to use DIAG2000 are in the *SYSTEM 2000 Software: Product Support Manual*. Job JCLDIAG provides sample JCL to execute DIAG2000.

JCL to compile and link the DIAG2000 program

Job JCLDIAGX provides sample JCL to compile and link DIAG2000 after source changes are made.

Run S2OP in Batch

SYSTEM 2000 software provides a program that looks like an alternate console to Multi-User software. It is an optional service that runs in three environments: TSO, CMS, and MVS batch. S2OP is documented in Chapter 3 of the *SYSTEM 2000 Software: Product Support Manual*. Job JCLS2OP provides sample JCL for running S2OP in the MVS batch environment.

Assemble and Link an XBUF table

SYSTEM 2000 software offers an Extended Buffer (XBUF) Manager feature, which allows the use of several kinds of caching techniques. This feature is documented in the *SYSTEM 2000 Software: Product Support Manual*. The use of XBUF requires that XBUF macros be coded and then assembled and linked into XBUF tables. Job JCLXBUF provides sample JCL to assemble and link an XBUF table. XBUF is available for use in both single-user and Multi-User environments.

CICS Maintenance

Change the CICS Interface Parameters

The CICS module S2KCUSE is supplied with default parameters that specify required information, such as maximum number of PLEX users, maximum number of SCF users in the interface, and maximum number of terminals. These parameters have minimum and maximum values as shown below. You might need to modify one or more of these parameters.

To change these parameters, edit S2KCUSE as desired, and then reassemble S2KCUSE using job JCLCL01. S2KCUSE must be link-edited to be AMODE=31, RMODE=24.

CICS Interface Parameters with Value Ranges

PLEX= specifies the number of concurrent PLEX transactions that will be using the interface.

DEFAULT 32 RANGE 0-230

PWAITS= specifies the number of one-second waits the interface will issue for a new PLEX user if all specified PLEX users are active.

DEFAULT 2 RANGE 1-10

STOPWT= specifies the wait interval for PLXSTOP in one-second increments. The format is HHMMSS.

DEFAULT 20 RANGE 1-995959

SCF= specifies the number of concurrent SCF users that will be using the interface. This refers to the SCF transactions that have commands active in the interface (i.e., URB slots).

DEFAULT 10 RANGE 0-230

MAXTERM= specifies the maximum number of terminals that will be using SCF.

DEFAULT 40 RANGE 0-10000

Change PF Key Settings

New transaction S2KK enables you to dynamically alter PF key settings for S2KU, S2KE, and S2OP. To alter a setting, invoke the S2KK transaction and specify the environment to be altered:

```
S2KK S2KE - changes PF keys for the S2KE transaction
S2KK S2OP - changes PF keys for the S2OP transaction
S2KK S2KU - changes PF keys for the S2KU transaction
```

You can also alter a setting by invoking S2KK from within the transaction itself. For a complete description of this enhancement, see the *SYSTEM 2000 Software: CICS Interface Manual*.

To change the installation-wide PF key defaults, change the S2KUGEN macro and reassemble and link the S2KCUSE routine using job JCLCL01.

Source Code Maintenance

Source fixes for the CICS interface are applied with the utility IEBUPDTE. After they have been applied, the source modules must be reassembled and relinked. These three jobs on the CNTL library reassemble and link CICS modules:

- Job JCLCSCF assembles and links the modules that make up the SCF interface.
- Job JCLCPLEX assembles and links the modules that make up the PLEX interface.
- Job JCLCEDIT assembles and links the modules that make up the CICS Command Editor.

QueX Maintenance

Modify Function Key Settings

Job JCLQXPFT (Figure 10.3) contains the default settings for the program function keys. The comments provided with the job explain how to change the default settings.

Figure 10.3 JCLQXPFT

```
//JCLQXPFT JOB (ACCT,ACCT2),
// 'DESCRIPTION',TIME=(,59),NOTIFY=USERID
//*
//* MEMBER NAME: JCLQXPFT
//*
//* CREATED ON: 5 OCT 2004 AT 16:25:08
//* PF1 EQU X'F1' DISPLAY VALUE'F140''
//* PF2 EQU X'F2' DISPLAY VALUE'F240''
//* PF3 EQU X'F3' DISPLAY VALUE'F340''
//* PF4 EQU X'F4' DISPLAY VALUE'F440''
//* PF5 EQU X'F5' DISPLAY VALUE'F540''
//* PF6 EQU X'F6' DISPLAY VALUE'F640''
//* PF7 EQU X'F7' DISPLAY VALUE'F740''
//* PF8 EQU X'F8' DISPLAY VALUE'F840''
//* PF9 EQU X'F9' DISPLAY VALUE'F940''
//* PF10 EQU X'7A' DISPLAY VALUE'F1F0''
//* PF11 EQU X'7B' DISPLAY VALUE'F1F1''
//* PF12 EQU X'7C' DISPLAY VALUE'F1F2''
//*****
//*****
//* PF KEYS 13 THROUGH 24 MIRROR
//* PF KEYS 1 THROUGH 12
//*****
//*****
//* SELECT ONE OF THE VALUES ABOVE AND REPLACE THE
//* INDICATED VALUE IN THE @PFTABLE ZAP DECK BELOW.
//*
```

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```
//ZAPQPFK EXEC PGM=IMASpzAP,
//          PARM='IGNIDRFULL'
//SYSLIB   DD DSNAME=S2K.V2.LOAD,
//          DISP=SHR
//SYSPRINT DD SYSOUT=A
//SYSIN    DD *
*
* THE @PFTABLE MODULE IS ZAPPED WITH THE ATTENTION
* IDENTIFIER (AID) VALUES FOR THE ASSIGNED PF KEYS.
* THESE VALUES ARE INTERPRETED AT EXECUTION TIME TO
* DETERMINE THE INPUT COMMAND OR FUNCTION FROM SCREEN
* QX04 (ITEM MENU), SCREEN QX01 (USERVIEW ID), AND
* SCREEN QX05 (RECORD MENU).
*
NAME QUEXPGM @PFTABLE
VER 0000 F200          SELECT          PFKEY 2
VER 0006 F100          HELP            PFKEY 1
VER 000C F300          EXIT            PFKEY 3
VER 0012 F400          MODIFY          PFKEY 4
VER 0018 F500          INSERT          PFKEY 5
VER 001E F600          DELETE          PFKEY 6
VER 0024 F700          BACK            PFKEY 7
VER 002A F900          SORT            PFKEY 9
VER 0030 F800          MENU            PFKEY 8
VER 0036 7C00          PAGE PLUS       PFKEY 12
VER 003C 7B00          PAGE MINUS      PFKEY 11
*
*   REPLACEMENT VALUES FOR QUEX PF KEYS
*
REP 0000 F200          AID SET FOR SELECT
REP 0006 F100          AID SET FOR HELP
REP 000C F300          AID SET FOR EXIT
REP 0012 F400          AID SET FOR MODIFY
REP 0018 F500          AID SET FOR INSERT
REP 001E F600          AID SET FOR DELETE
REP 0024 F700          AID SET FOR BACK
REP 002A F900          AID SET FOR SORT
REP 0030 F800          AID SET FOR MENU
REP 0036 7C00          AID SET FOR PAGE PLUS
REP 003C 7B00          AID SET FOR PAGE MINUS
*
* THE QXCOMCS CSECT IS ZAPPED WITH THE DISPLAY VALUES
* OF THE PF KEY ASSIGNMENTS.  THESE VALUES WILL BE
* DISPLAYED IN THE APPROPRIATE FIELDS ON THE QX04
* SCREEN DISPLAY.
*
NAME QUEXPGM QXCOMCS
VER 0004 F240          SELECT DISPLAY VALUE'2'
VER 002A F140          HELP  DISPLAY VALUE'1'
VER 002C F440          MODIFY DISPLAY VALUE'4'
VER 002E F540          INSERT DISPLAY VALUE'5'
VER 0030 F640          DELETE DISPLAY VALUE'6'
VER 0033 F840          MENU  DISPLAY VALUE'8'
VER 0035 F740          BACK  DISPLAY VALUE'7'
VER 0037 F940          SORT  DISPLAY VALUE'9'
VER 0039 F340          EXIT  DISPLAY VALUE'3'
*
* REPLACEMENT VALUES SHOULD REPRESENT CHARACTER
* NOTATION OF ASSIGNED PF KEY NUMBER.
* EXAMPLE :
*
* IF REPLACEMENT VALUE ABOVE IS X'F4' FOR PF KEY
* FOUR, THEN THE REPLACEMENT VALUE BELOW SHOULD BE
```

```
* X'F440' (EBCDIC'4') .  
*  
REP 0004 F240      SELECT DISPLAY CODE  
REP 002A F140      HELP   DISPLAY CODE  
REP 002C F440      MODIFY DISPLAY CODE  
REP 002E F540      INSERT DISPLAY CODE  
REP 0030 F640      DELETE DISPLAY CODE  
REP 0033 F840      MENU   DISPLAY CODE  
REP 0035 F740      BACK   DISPLAY CODE  
REP 0037 F940      SORT   DISPLAY CODE  
REP 0039 F340      EXIT   DISPLAY CODE  
/*  
//
```


Appendix A: Installation Checklist

Listed here are names and descriptions of the data entry fields in the order they appear on the S2KIVR panel. Use this checklist to determine what these values should be for your installation, and then fill in the S2KIVR panel.

S2KIVR Application Libraries

Output JCL Data Set Name: _____ S2KIVR Variable Name: s2kods

Name of the S2KIVR output library. S2KIVR writes to this partitioned data set all the JCL members that it generates. If this data set does not exist, it will be created.

Default: S2K.V2.CNTL

FT Skeleton Library Name: _____ S2KIVR Variable Name: s2kispsl

Name of the partitioned data set that contains the S2KIVR file tailoring skeletons.

Default: S2K.V2.SOURCE

ISPF Panel Library Name: _____ S2KIVR Variable Name: s2kisppl

Name of the partitioned data set that contains the S2KIVR ISPF panels.

Default: S2K.V2.SOURCE

Job Card Information

Job Accounting Information: _____ S2KIVR Variable Name: s2kacct

Any required job accounting information. Enclose all the information within parentheses. A comma follows the accounting parameter, which requires that at least the first of the additional JCL statement fields be used.

JCL Statements (1, 2, 3, 4, and 5):

_____	S2KIVR Variable Name: s2kjcl1
_____	s2kjcl2
_____	s2kjcl3
_____	s2kjcl4
_____	s2kjcl5

Specify in these fields any additional site-dependent job card parameters, JCL comments, or JES control cards that are part of the JOB statement or that are to appear before the first EXEC statement.

Because a comma follows the job accounting information, at least the first additional JCL statement must be used. JCL statements 2 through 5 are optional and if left blank are ignored.

Here are some examples of generated job cards based on the JCL statements that were used:

```
//JCLCOB JOB (ACCT1, ACCT2, ACCT3),
// 'DESCRIPTION', TIME=(,59),NOTIFY=USERID      JCL Statement 1

//JCLASM JOB (ACCT1,ACCT2),
// 'DESCRIPTION',                               JCL Statement 1
// TIME=(,59),                                  JCL Statement 2
// NOTIFY=USERID                               JCL Statement 3
/*JOBPARM LINES=1000                           JCL Statement 4
/*ROUTE PRINT PRINTER1                        JCL Statement 5
```

Fields Common to All Products

Base Product Installation: _____ S2KIVR Variable Name: s2kbase

Either YES or NO. If YES, JCL members for the SYSTEM 2000 Base product are created when the GO command is issued. If NO, these JCL members are not created. Member #BASEMBR contains a list of these members.

Default: YES

Multi-User Product Installation: _____ S2KIVR Variable Name: s2kmup

Either YES or NO. If YES, JCL members for the Multi-User product are created when the GO command is issued. If NO, these JCL members are not created. Member #MUMBR contains a list these members.

Default: YES

Multi-User SVC Number: _____ S2KIVR Variable Name: s2ksvc

SVC number for Multi-User. This number is supplied by your systems programmer. It must be in the range of 200 through 255.

No default.

XMS Multi-User Installation: _____ S2KIVR Variable Name: s2kxms

Either YES or NO. YES indicates that the XMS version of Multi-User is being installed. NO indicates that the SVC version of Multi-User is being installed.

Default: YES

CICS Interface Installation: _____ S2KIVR Variable Name: s2kcics

Either YES or NO. If YES is specified, JCL members for the CICS interface are created when the GO command is issued. If NO is specified, these JCL members are not created. Member #CICSMBR contains a list of these members.

Default: YES

CICS Version: _____ S2KIVR Variable Name: s2kciver

Version number of CICS the interface will be installed with, such as 3.2 or 4.1. For CICS Transaction Server 1.x, just enter 5.x in this field. If the CICS interface installation field is NO, this field is not used and can be left blank.

No default.

QueX Installation: _____ S2KIVR Variable Name: s2kquex

Either YES or NO. If YES, JCL members for the QueX product are created when the GO command is issued. If NO, these JCL members are not created. Member #QUEXMBR contains a list of these members.

Default: YES

Generate User-Supplied JCL Members: _____ S2KIVR Variable Name: s2kujcl

Either YES or NO. If YES, user-supplied JCL members are created when the GO command is issued. If NO, these JCL members are not created. Member #USERMBR contains a list of these members.

No default.

Printer Output Class: _____ S2KIVR Variable Name: s2koutcl

One-character value for the printer output class. This value is placed in all SYSOUT DD statements.

Default: A

Work File DASD Unit Type: _____ S2KIVR Variable Name: s2kwfunt

Unit type for all temporary work files.

Default: SYSDA

Linkage Editor Program Name: _____ S2KIVR Variable Name: s2klkpgm

Name of the linkage editor program.

Default: IEWL

Assembler Program Name: _____ S2KIVR Variable Name: s2kaspgm

Name of the assembler program.

Default: ASMA90

COBOL Compiler Name: _____ S2KIVR Variable Name: s2kcbpgm

Name of the COBOL compiler program. If the compiler is LE/370-compliant, also fill in the MVS LE/370 Link Library field.

Default: IGYCRCTL

PL/I Compiler Name: _____ S2KIVR Variable Name: s2kplpgm

Name of the PL/I compiler program.

Default: IEL0AA

Fortran Compiler Name: _____ S2KIVR Variable Name: s2kftpgm

Name of the Fortran compiler program.

Default: FORTVS

Release Level of Fortran Compiler: _____ S2KIVR Variable Name: s2kftrel

Release Level of the Fortran compiler. This value is used in the PARM field of the execute card for the SYSTEM 2000 Fortran PLEX precompiler.

Default: FTN3

SYSTEM 2000 Load Library: _____ S2KIVR Variable Name: s2kload

Data set name of the SYSTEM 2000 load library. This library contains all the load modules necessary to run the SYSTEM 2000 software. Load modules are listed in Appendix B.

Default: S2K.V2.LOAD

SYSTEM 2000 Source Library: _____ S2KIVR Variable Name: s2ksrce

Data set name of the SYSTEM 2000 source library. This library contains sample JCL, assembler macros, validation program source modules, command files, and loader string data. Library members are listed in Appendix C.

Default: S2K.V2.SOURCE

SYSTEM 2000 Validation Library: _____ S2KIVR Variable Name: s2kvalid

Data set name of the validation output library. This library was unloaded from the installation media. It contains output from the batch validation jobs that you will use to compare to the output from the validation jobs that you run. Library members are listed in Appendix E.

Default: S2K.V2.VALID

SYSTEM 2000 JCL Library: _____ S2KIVR Variable Name: s2kcntl

Data set name of the SYSTEM 2000 JCL library. This should be the same data set name used in the Output JCL Data Set Name field.

Default: Output JCL Data Set Name

Single-User Parm File Data Set: _____ S2KIVR Variable Name: s2kprmds

Name of the data set that is to contain the single-user execution parameters used in the batch validation job streams. If the value of the Single-User Parm File Member Name field is NONE, the data set is treated as a sequential file name. If the member name field has any other value, the data set name is created as dataset.name(member).

Default: S2K.V2.CNTL

Single-User Parm File Member Name: _____ S2KIVR Variable Name: s2ksparm

Name of the partitioned data set member that contains the single-user execution parameters used in the batch validation job streams. If the value of this field is NONE, the field is ignored and the Single User Parm File Data Set name can be a sequential file. If the member name field has any other value, the data set name is created as dataset.name(member).

Default: NLPARM

S2KPAD File Volume Serial: _____ S2KIVR Variable Name: s2kpadvl

Volume serial ID of the DASD volume on which the S2KPAD00 file is allocated. A value is required for this field.

No default.

Database Name High-Level Qualifier: _____ S2KIVR Variable Name: s2kdbhlq

High-level data set name qualifier for the files that contain the databases. For example, if the high-level qualifier is PROD.S2K, the data set name for File 1 of the LIBRARY database would be PROD.S2K.LIBRARY1.

Default: S2K.V2

Database VSAM CI Size: _____ S2KIVR Variable Name: s2kcisz

CI size for the VSAM database files. This value should effectively utilize the device type track size. All CI sizes are listed in the *SYSTEM 2000 Software: Product Support Manual*. You can also get a list of valid CI sizes by pressing the PF1 key when the cursor is on this field in the S2KIVR panel.

Default: 4096

Database File Volume Serial: _____ S2KIVR Variable Name: s2kdbvol

Volume serial ID of the DASD volume on which the databases used by the product validation jobs are allocated. This field is required.

No default.

TSO CLIST Library: _____ S2KIVR Variable Name: s2kclist

Data set name of the CLIST library where the SYSTEM 2000 CLISTs are stored. This field is used in job JCLPROCL, which copies the CLISTs from the S2KIVR output library to the TSO CLIST library.

Default: S2K.TSO.CLIST

TSO Help Library: _____ S2KIVR Variable Name: s2khlps

Data set name of the TSO Help library where the Help files for the SYSTEM 2000 CLISTs are stored. This field is used in job JCLPROCL, which copies the Help files from the S2KIVR output library to the TSO Help Library.

Default: S2K.TSO.HELP

Cataloged Procedure Library: _____ S2KIVR Variable Name: s2kprocl

Data set name of the procedure library where the SYSTEM 2000 cataloged procedures are stored. This field is used in job JCLPROCL, which copies the JCL procedures from the S2KIVR output library to the JCL cataloged procedure library.

Default: S2K.V2.PROCLIB

MVS System Macro Library: _____ S2KIVR Variable Name: s2kmaclb

Data set name of the MVS System Macro library. This library is used in the SYSLIB concatenation of the assembler step of jobs that assemble and link assembler language programs.

Default: SYS1.MACLIB

MVS System Generation Macro Library: _____ S2KIVR Variable Name: s2kgmacl

Data set name of the MVS System Generation Macro library. This library is used in the SYSLIB concatenation of the assembler step of jobs that assemble and link assembler language programs.

Default: SYS1.MODGEN

MVS Authorized Library: _____ S2KIVR Variable Name: s2kauth

Data set name of the MVS Authorized library where modules S2KCMC and S2KPC will reside. This library is designated by your systems programmer.

Default: S2K.V2.AUTH

COBOL Compiler Load Library: _____ S2KIVR Variable Name: s2kcobl

Data set name of the load library that contains the COBOL compiler.

Default: SYS1.COBLIB

PL/I Compiler Load Library: _____ S2KIVR Variable Name: s2kplcm

Data set name of the load library that contains the PL/I compiler. If you are not going to compile any PL/I programs, you can leave it at the default value.

Default: SYS1.PLIBASE

PL/I Link Library: _____ S2KIVR Variable Name: s2kpllk

Data set name of PL/I link library. This library is included in the SYSLIB concatenation of the linkage editor step of jobs that compile PL/I application programs. If you are not going to compile any PL/I programs, you can leave it at the default value.

Default: SYS1.PLILINK

PL/I Run-Time Library: _____ SYSIVR Variable Name: s2kplrn

Data set name of the PL/I run-time library. This library is included in the STEPLIB concatenation of any job step that executes a PL/I application program. If you are not going to run any PL/I application programs, you can leave this field at the default value.

Default: S2K.PLIRUN

Fortran Compiler Load Library: _____ S2KIVR Variable Name: s2kftcmp

Data set name of the load library that contains the Fortran compiler. If you are not going to compile any Fortran application programs, you can leave this field blank.

No default.

Fortran Link Library: _____ S2KIVR Variable Name: s2kftlnk
Data set name of the Fortran link library. This library is included in the SYSLIB concatenation of the linkage editor step of jobs that compile and link Fortran programs. If you are not going to compile any Fortran application programs, you can leave this field blank.

No default.

LE/370 Link Library: _____ S2KIVR Variable Name: s2kceelk

Data set name of the LE/370 link library. This library is included in the SYSLIB concatenation of the Linkage Editor step of jobs that compile COBOL programs. Enter a value in this field only if you are using an LE/370-compliant COBOL compiler. Otherwise, leave the field blank.

No default.

Multi-User Product Fields

The next set of data entry fields is used for the Multi-User product. If the Multi-User Installation field is NO, all the fields in the Multi-User section are ignored. If the field is YES, these fields must contain valid values.

S2KCOM File Data Set Name: _____ S2KIVR Variable Name: s2kcomds

Data set name of the 30-byte file S2KCOM.

Default: S2K.V2.COM

S2KCOM File Volume Serial: _____ S2KIVR Variable Name: s2kcvol

Volume serial ID where the S2KCOM file is to be allocated.

No default.

Accounting Log File High-Level Qualifier: _____ S2KIVR Variable Name: s2kachlq

High-level qualifier of the Accounting Log file data set names. For example, if the high-level qualifier is PROD.V2.ACCOUNT, the log file data set names will be PROD.S2K.ACCOUNT.MANX and PROD.S2K.ACCOUNT.MANY.

Default: S2K.V2.ACCOUNT

Accounting Log File Volume Serial: _____ S2KIVR Variable Name: s2kacvol

Volume serial ID of the DASD volume where the Accounting Log files are allocated.

No default.

Accounting Log File DASD Unit Type: _____ S2KIVR Variable Name: s2kacunt

DASD unit type of the volume where the Accounting Log files are allocated.

Default: SYSDA

Accounting Log File Block Size: _____ S2KIVR Variable Name: s2kacblk

Block size of the Accounting Log files. This value is used when the log files are created or when they are dumped to disk or tape.

Default: 9076

Accounting Log File Primary Space Amount: _____ S2KIVR Variable Name: s2kacspc

Primary space in cylinders to be used when the Accounting Log files are allocated.

Default: 10

Web Interface CGI-BIN Library Name: _____ S2KIVR Variable Name: s2kcgbin

Enter into this field the name of the Open Edition CGI BIN library where the SYSTEM 2000 Web interface modules reside.

Default: /www/s2k-bin

CICS Interface Fields

The next set of data entry fields is used for the CICS interface. If the CICS interface installation field is NO, all of the fields in the CICS section are ignored. If the field is YES, these fields must contain valid values.

CICS Command Editor DSNAME: _____ S2KIVR Variable Name: s2ks2klb

Data set name of the CICS S2KLIB data set.

Default: S2K.CICS.S2KLIB

CICS Load Library: _____ S2KIVR Variable Name: s2kcilod

Data set name of the CICS load library. This library is included in the SYSLIB concatenation of the linkage editor step for all jobs that compile and link CICS programs. It is also named in the STEPLIB DD statements of job steps that execute the CICS language preprocessors.

Default: CICS.LOADLIB

CICS Macro Library: _____ S2KIVR Variable Name: s2kcimac

Data set name of the CICS assembler macro library. This library is included in the SYSLIB concatenation of the assembler steps for the jobs that assemble and link CICS assembler language programs. This library is also included in the SYSLIN concatenation of the linkage editor step of these jobs.

Default: CICS.MACLIB

CICS COBOL Link Library: _____ S2KIVR Variable Name: s2kcicob

Data set name of the COBOL CICS link library. This library is included in the SYSLIN concatenation of the linkage editor step of jobs that compile and link CICS COBOL programs.

Default: CICS.COBLIB

CICS PL/I Link Library: _____ S2KIVR Variable Name: s2kcipli

Data set name of the PL/I CICS link library. This library is included in the SYSLIN concatenation of the linkage editor step of jobs that compile and link PL/I programs.

Default: CICS.PL1LIB

Appendix B: Library S2K.V2.LOAD

The following list shows the load modules on S2K.V2.LOAD. All of these modules are generated via the standard IBM linkage editor. Interpret the Mode column as follows: blank means AMODE=24, RMODE=24. A31 means AMODE=31, RMODE=24. R31 means AMODE=31, RMODE=ANY.

Abbreviations:

A	- Assembler PLEX	P	- PL/I PLEX
AL	- Accounting Log	QueX	- QueX Software
ALL	- All features or special functions	RB	- Rollback (Recovery)
C	- COBOL PLEX	RW	- Report Writer
CICS	- CICS Interface	SCF	- Self-Contained Facility
F	- FORTRAN PLEX	SU	- Single-user
MT	- Multi-Thread	USI	- Universal Software Interface
MU	- Multi-User		

Module Name	Required by	Mode	Entry Point	Description
\$AVOPTS	ALL		\$AVOPTS	Routine to load S2KSETI at execution time
@ADABEND	QueX	A31	ADABEND	QueX load module
@ADCATIO	QueX	A31	ADCATIO	QueX load module
@ADTRMIO	QueX	A31	ADTRMIO	QueX load module
@CMSEDTR	QueX	A31	CMSEDTR	QueX load module
@SAS	ALL			Copyright statement
ACTCMD	AL			Accounting load module
ACTCOM	AL			Accounting load module
ACTDBO	AL			Accounting load module
ACTERM	AL			Accounting load module
ACTIO	AL			Accounting load module
ACTIPL	AL			Accounting load module
ACTIVATE	AL			Accounting load module
ACTQUAL	AL			Accounting load module

Module Name	Required by	Mode	Entry Point	Description
ACTUSI	AL			Accounting load module
ACTUST	AL			Accounting load module
ACTUTIL	AL		ACTUTIL	Utility routine to format and dump MU Accounting Log files
ADCATCTL	QueX	A31	ADCATCTL	QueX load module
ADESTERM	QueX	A31	ADESTERM	QueX load module
AQUMAIN	AL			Accounting load module
AQUSORT	AL			Accounting load module
ARPDATE	AL			Accounting load module
ARPMAIN	AL			Accounting load module
ARPTIME	AL			Accounting load module
ASMCCCL	CICS	R31	ASMCCCL	Assembler validation program
CFIND	ALL	A31	CFINDCH	Hierarchical Table (HT) validation program
CLEAR2K	MU		CLEAR2K	Utility routine to clear tables kept in Type 2 SVC for MU
CLUDUMP	CICS	R31	CLUDUMP	UDMP transaction module
COBCCL	CICS	R31		COBOL command-level validation program
CONVERT	CICS	R31	CONVERT	Command Editor module
CVRTV2	ALL	A31	CVRTV2	Database conversion program
DFHPEP	CICS	R31	DFHPEP	Program Error Program
DIAG2000	MU		DIAG2000	Program to produce reports from the SYSTEM 2000 Diagnostic Log
DUMPXX	UTILITY		DUMPXX	Program to snap dump selected pages of a file
EDJRNL	CICS	R31	EDJRNL	Command Editor module
EXAMINDX	UTILITY		EXAMINDX	Program to compare index pages with data pages
EXAMINE	UTILITY		EXAMINE	Program to validate data values and report overflow

Module Name	Required by	Mode	Entry Point	Description
FINDACT	AL			Accounting load module
FINDMSG	QueX	A31	FINDMSG	QueX load module
FORMATSK	ALL	A31	FORMATSK	Subtask to format database file
F2BUILD	UTILITY		F2BUILD	Program to rebuild File 2
GENIUS	GENIUS		GENIUS	Genius executable module
GETNXLEX	CICS	R31	GETNXLEX	Command Editor module
GOTOSAS	ALL	A31	GOTOSAS	Module with information about PLEX programs and communications with the SAS System – MU
GOTOSASS		A31		Alias of GOTOSAS – SU
IDTRANS	QueX	A31	IDTRANS	QueX load module
INDEXPPT	UTILITY		INDEXPPT	Program to validate index Files 2 and 4
IOAID	CICS	R31	IOAID	Command Editor module
IOCTRL	CICS	R31	IOCTRL	Command Editor module
IOMEMBR	CICS	R31	IOMEMBR	Command Editor module
LOADTSK	ALL	A31	LOADTSK	Subtask to restore a saved database
LOGDUMP	UTILITY		LOGDUMP	Utility program to selectively print MU Diagnostic Log
MUPLINT	C, P, F, or A under MU		MSYSTEM2	Interface used for runtime communication between MU and PLEX program (loaded by S2KPLR)
NO522	MU	R31	NO522	Subtask attached by both MU region and dependent region to prevent OS 522 abends
OPENWAIT	USI	A31	OPENWAIT	Subtask to open a Keepfile or TAPES2K DCB
OSMACROS	AL			Accounting load module
OUTBLD	CICS	R31	OUTBLD	Command Editor module
PARSPARM	AL			Accounting load module
PARSTBL	AL			Accounting load module

Module Name	Required by	Mode	Entry Point	Description
PLXFRMT	CICS	R31	PLXFRMT	PLEX format module
PLXPBLD	CICS	R31	PLXPBLD	PLEX module linked with user application
PLXTRUE	CICS	R31	PLXTRUE	PLEX check for missing STOP S2K program
PL1CCL	CICS			PL/I validation program
PRCOMA	A		MAIN	Assembler language PLEX processor
PRCOMC	C		MAIN	COBOL language PLEX processor
PRCOMF	F		MAIN	FORTRAN language PLEX processor
PRCOMP	P		MAIN	PL/I language PLEX processor
QAEXIT	UTILITY	R31	QAEXIT	Timing and I/O statistics routine for SCF
QASTAT	UTILITY	R31	QAEXIT	Timing and I/O statistics routine for PLEX. Alias of QAEXIT.
QUBAPAR	QueX	A31	QUBAPAR	QueX load module
QUEXPGM	QueX		QUEXSTRT	QueX executable module under TSO
QUEXSCRN	QueX		QUEXSCRN	QueX load module
QUEXSTRT	QueX	A31	QUEXSTRT	QueX initialization routine
QULINK	QueX	A31	QULINK	QueX load module
QUS2KP	QueX	A31	QIS2LP	QueX load module
QUTBLD	QueX	A31	QUTBLD	QueX load module
QUVBPGM	QUVB		QUVBCTL	QUVB executable module
QUVBSCRN	QUVB		QUVBSCRN	QUVB application screens - QB01, QB03, LK01
QUWHCC	QueX	A31	QUWHCC	QueX load module
QXBDMNU	QueX	A31	QXBDMNU	QueX load module
QXBLDSCR	QueX	A31	QXBLDSCR	QueX load module
QXCNTL	QueX	A31	QXCNTL	QueX load module
QXCTRL	QueX	A31	QXCTRL	QueX load module

Module Name	Required by	Entry Mode	Point	Description
QXINIT	QueX	A31	QXINIT	QueX load module
QXPARS	QueX	A31	QXPARS	QueX load module
QXRDMENU	QueX	A31	QXRDMENU	QueX load module
QXRDSR	QueX	A31	QXRDSR	QueX load module
QXSCRMGR	QueX	A31	QXSCRMGR	QueX load module
QXSCRTAB	QueX		QXSCRTAB	Generate application screen tables
QXUTIL	QueX	A31	QXUTIL	QueX load module
QX1009 – QX1016	QueX		QX1009 – QX1016	Help screens
QX1018 – QX1105	QueX		QX1018 – QX1105	Help screens
RECHAIN	RECHAIN		RECHAIN	File 5 reusable space chain verification program
RWTCOM01		R31	RWTCOM	Data area used by REPORT processor
SASASCE	S2K		SASASCE	Assembler PLEX validation program
SASCBCE			SASCBCE	COBOL PLEX validation program
SASFOCE		R31	SASFOCE	FORTRAN PLEX validation program
SASPLCE		R31	SASPLCE	PL/I PLEX validation program
SAVECHK	S2K		SAVECHK	Savefile verification program
SAVETSK	ALL	A31	SAVETSK	Subtask to save a database
SCFDRVR	CICS	R31	SCFDRVR	SCF driver module
SCFERROR	CICS	R31	SCFERROR	SCF error message text module
SCFINTF	CICS	R31	SCFINTF	SCF interface module
SCFPGBD	CICS	R31	SCFPGBD	SCF page build module
SCFPGMG	CICS	R31	SCFPGMG	SCF page management module
SETMODE	CICS	R31	SETMODE	Command Editor module

Module Name	Required by	Mode	Entry Point	Description
SMCNTL	SMON		SMCNTL	Alias of SMON
SMON			SMCNTL	Utility to reenter Session Manager after exiting the QueX software or QUVB
SYS2K	SCF-SU ALL-MU	R31	S2K	Executable module used by SCF users in SU and by all users in MU
SYS2KJOB	SCF under MU		MSYS2K	Interface used for runtime communication between SYSTEM 2000 software and SCF user in MU; location of user files
SYS2KTPI	SCF under MU (TSO only)		SCFTP2I	Interface used for runtime communication between SYSTEM 2000 software and SCF user in MU using TSO foreground; allows LOCAL files as well as user files in MU and has local output file
SYS2KTSO	SCF under MU (TSO only)		SCFTP2I	Alias of SYS2KTPI
S2CONSOL	MU	A31	S2CONSOL	Subtask to wait on console MODIFY command
S2EXIT	USI		S2EXIT	SYSTEM 2000 interface to user-exit code
S2KACCT	ALL	A31	ACTIPL	MU Accounting Log routine; loaded by MU (S2000) if Accounting enabled
S2KADRC	CICS	R31	S2KADRC	SYSTEM 2000 SVC communication module
S2KCMC	XMS	A31	S2KCMC	Control program to set up XMS environment and initialize MU for XMS
S2KCOPY	MU under SVS, MVS, TSO, or a fetch-protected system	A31	S2KCOPY	MU SVC routine to move data areas from one region to another protected system (if required, must be linked into SCP nucleus)
S2KCUSE	CICS	A31	S2KCUSE	CICS user module
S2KDBAP	XBUF	A31	S2KXBUF	Alias of S2KXBUF
S2KDLT	CICS	R31	S2KDLT	Command Editor module
S2KDMV6	SCF under SAS	A31	S2KDMV6	Interface used to invoke Version 6 of the SAS system

Module Name	Required by	Mode	Entry Point	Description
S2KEPROC	CICS	R31	S2KEPROC	Command Editor module
S2KERR	CICS	R31	S2KERR	Command Editor module
S2KEXIN	USI		S2KEXIN	EXIT00 code for user-exit methodology
S2KEX07			S2KEXIN	Sample User Exit
S2KEX13			S2KEXIN	Sample User Exit
S2KEX42			S2KEXIN	Sample User Exit
S2KEX45			S2KEXIN	Sample User Exit
S2KFINDD	CICS	R31	S2KFINDD	Command Editor module
S2KGET	CICS	R31	S2KGET	Command Editor module
S2KGLOAD	UTILITY	R31	LOADGEN	COBOL PLEX load program generator
S2KGUNLD	UTILITY	R31	UNLDGEN	COBOL PLEX unload program generator
S2KIDCM	ALL		S2KIDCM	Dynamic allocation of VSAM files
S2KINS	CICS	R31	S2KINS	Command Editor module
S2KIO	ALL	A31	S2KIO	I/O coordination routine (loaded by module S2K for SU and by SUPS2K for MU)
S2KLIST	CICS	R31	S2KLIST	List transaction module
S2KLISTD	CICS	R31	S2KLISTD	Command Editor module
S2KLOG	CICS	R31	S2KLOG	Writes CICS destination S2KL
S2KMDFY	CICS	R31	S2KMDFY	Command Editor module
S2KMRO	CICS	R31	S2KMRO	Routine to process terminal abends in a MRO environment
S2KPC	XMS	A31	S2KPC	Routine to handle interregion communication in an XMS environment
S2KPFKY	CICS	R31	S2KPFKY	User PF key definitions module
S2KPL	C, P, F, or A	R31	S2KPL	Interface used by PLEX programs at run-time (linked with user's program; loads S2KPLR at run time)

Module Name	Required by	Mode	Entry Point	Description
S2KPLR	C, P, F, or A	A31	S2KPLR	Interface used in run-time communication between SYSTEM 2000 software and PLEX programs (loaded by S2KPL at run time; loads S2KPLI in SU and loads MUPLINT in MU)
S2KPTR	CICS	R31	S2KPTR	Command Editor module
S2KSAVE	CICS	R31	S2KSAVE	Command Editor module
S2KSBMT	CICS	R31	S2KSBMT	Command Editor module
S2KSCR	CICS	R31	S2KSCR	Command Editor module
S2KSEND	CICS	R31	S2KSEND	Command Editor module
S2KSETI	ALL		S2KSETI	Independent utility to authorize new SAS Institute Program Products and renew authorization for currently licensed products
S2KSETPF	CICS	R31	S2KSETPF	Command Editor module
S2KSIP	ALL	A31	S2KSIP	Routine to initialize SYSTEM 2000 work areas (loaded by SYS2K or S2KPLI at initialization time; loads S2KPARM)
S2KTERM	CICS	R31	S2KTERM	CICS interface termination routine
S2KWEBD	WEB	R31	S2KWEBD	CGI Web interface
S2KWEBTO	WEB	R31	S2KWEBTO	CICS Web interface timeout program
S2KWLOG	WEB	R31	S2KWLOG	CICS Web stats display interface
S2KWSTAT	WEB	R31	S2KWSTAT	CICS Web user display interface
S2KXBUF	XBUF	A31	S2KXBUF	Control program to execute XBUF
S2OP	MU		S2OP	Alternate console routine
S2OPJOB	MU		S2OP	Alias of S2OP
S2OPTSO	MU		S2OP	Alias of S2OP
S2000	MU	R31	SUPS2K	MU routine to schedule SYSTEM 2000 usage for batch and TP users

Module Name	Required by	Mode	Entry Point	Description
TIMDAT	UTILITY		TIMDAT	Assembly load module routine linked with MU validation programs
TRDCOM01	SCF, C, P, F or A	R31	TRDCOM	Data area used by non-RW system
UPKEEP	UTILITY		UPKEEP	Routine to inspect Update Log and Keepfile
USERCOM	ALL	R31	USERCOM	User communication block (loaded by SYS2K or S2KPLI from LOAD library)
USERID	CICS	R31	USERID	Command Editor module
WAITUNIT	ALL	A31	WAITUNIT	Subtask to wait for a SAVE unit
XBUFTBL	XBUF		XBUFTBL	Pregenerated XBUF table
XMLCHECK	UTILITY	A31	XMLCHECK	XML name replacement utility

Appendix C: Library S2K.V2.SOURCE

<i>Member Name</i>	<i>Description</i>
#BASEMBR	List of member names for base SYSTEM 2000 product
#CICSMBR	List of member names for interface to CICS product
#MUMBR	List of member names for Multi-User S2K product
#PLIDATA	Parameter list copy member for PLEX calls to SYSTEM 2000 software
#QUEXMBR	List of member names for QueX product
ACTIO	Multi-User accounting I/O source program
AID	Macro
AQUMAIN	Multi-User Accounting Log qualifying program
ARPMAIN	Multi-User Accounting Log report program
ASMCCCL	Assembler validation source program
AUTHFUNC	Macro
CATDATA	QUEXCATALOG database loader string data
CATDEFIN	QUEXCATALOG database command file
CHAIN	Macro
CLMASMC	Installation macro to generate job JCLCL04
CLMASML	Installation macro to generate job JCLCL01
CLMCOBC	Installation macro to generate job JCLCL02
CLMPL1C	Installation macro to generate job JCLCL03
CLMUIDZ	Installation macro to generate job JCLCLUZ
CLUDUMP	S2KCUSE dump program
CLUIDZAP	Zap cards for job JCLCLUZ
COBCCL	COBOL command-level validation program
COCHK	Macro to validate a component number
COEDIT	Macro to initiate value table generation for a component
COMDS	Macro
CONVERT	CICS command-level conversion routine
COPYRITE	Copyright notice
COVALUE	Macro to generate a component value table entry
CPYASPGM	Include member for assembler JCL
CPYCRCTL	Include member for COBOL Compiler JCL
CPYJBCRD	Include member for Job Statements
CPYPARMD	Include member for Single-User Parm File
CPYPARMP	Include member for Single-User JCL Proc
CPYSETP	Include member for Single-User Parm File
CPYVERNO	Include member for SYSTEM 2000 version number
CPYXMS	Include member for S2KCOM file DD statement
CSDQUEX	CICS RDO table definitions for QueX software
CTRLDFLT	Macro
CTRLREC	Macro
DAID3270	CICS interface SCF PF key settings
DEFEREGS	Macro
DEMOFILE	Skeleton for TSO CLIST DEMOFILE
DEXTPARM	Macro for generating USI (S2EXIT)
DIAG2000	COBOL source utility to produce Diagnostic Log summary reports
DIRA	Macro for SVC assembly
DJOBQ	Macro for SVC assembly
DOPERAID	Macro

<i>Member Name</i>	<i>Description</i>
DPLRBLKS	Macro
DRVRSTRG	Macro
DSCFERR	Macro
DSCHCVT	Macro for SVC assembly
DSTACE	Macro
DSTOPPRM	Macro
DSVCTBL	Macro for SVC assembly
DS2KCUSE	Macro
DS2KLOG	CICS macro
DS2KPCI	Macro
DUCB	Macro
DUMPXX	Source program to snap dump selected pages of a file
<i>DURB</i>	<i>Macro for SVC assembly</i>
DURBMU	Macro
EDITCOM	CICS macro
EDJRNL	CICS Command Editor module
EDMEMBR	CICS macro
EMPDEFIN	Command File to create EMPLOYEE database
EMP1DATA	First loader string data for EMPLOYEE database
ENTERMU	Macro
EQUIREGS	Macro
EXITAREA	Macro to define areas used by user-exit routines
EXITBGN	User-exit prologue macro
EXITEND	User-exit epilogue macro
EXTPARM	Macro to define user-exit parameter list
EXTWAIT	Macro used in generating user-exit interface
GENIUS	Skeleton for TSO CLIST GENIUS
GENIUSH	Skeleton for the GENIUS CLIST Help file
GENPCI	Macro
GENROUT	Macro
GENSTACT	Macro
GENURBS	Macro
GENURB1	Macro
GETNXLEX	CICS Command Editor module
GVTNOTE	Restricted Rights Legend
HXDIGIT	Macro to convert decimal SVC number to hexadecimal
INITMU	Macro
IOAID	CICS Command Editor module
IOCTRL	CICS Command Editor module
IOMEMBR	Assembler interface program
JCLACT	Skeleton for JCL member JCLACT
JCLACTCB	Skeleton for JCL member JCLACTCB
JCLALCAT	Skeleton for JCL member JCLALCAT
JCLALLOC	Skeleton for JCL member JCLALLOC
JCLAQURU	Skeleton for JCL member JCLAQURU
JCLARPRU	Skeleton for JCL member JCLQRPRU
JCLASM	Skeleton for JCL member JCLASM
JCLBACK	Skeleton for JCL member JCLBACK
JCLCEDIT	Skeleton for JCL member JCLCEDIT
JCLCFIND	Skeleton for JCL member JCLCFIND
JCLCGID	Skeleton for JCL member JCLCGID

<i>Member Name</i>	<i>Description</i>
JCLCGIO	Skeleton for JCL member JCLCGIO
JCLCICS	Skeleton for JCL member JCLCICS
JCLCIZAP	Skeleton for JCL member JCLCIZAP
JCLCLUZ	Skeleton for JCL member JCLCLUZ
JCLCL01	Skeleton for JCL member JCLCL01
JCLCL02	Skeleton for JCL member JCLCL02
JCLCL03	Skeleton for JCL member JCLCL03
JCLCL04	Skeleton for JCL member JCLCL04
JCLCNVRT	Skeleton for JCL member JCLCNVRT
JCLCOB	Skeleton for JCL member JCLCOB
JCLCPLEX	Skeleton for JCL member JCLCPLEX
JCLCSCF	Skeleton for JCL member JCLCSCF
JCLCSDU	Skeleton for JCL member JCLCSDU
JCLDEL	Skeleton for JCL member JCLDEL
JCLDIAG	Skeleton for JCL member JCLDIAG
JCLDIAGX	Skeleton for JCL member JCLDIAGX
JCLDOC	Skeleton for JCL member JCLDOC
JCLDUMP	Skeleton for JCL member JCLDUMP
JCLEMP	Skeleton for JCL member JCLEMP
JCLEXAM	Skeleton for JCL member JCLEXAM
JCLEXINX	Skeleton for JCL member JCLEXINX
JCLEXIT	Skeleton for JCL member JCLEXIT
JCLFFDI	Skeleton for JCL member JCLFFDI
JCLFORT	Skeleton for JCL member JCLFORT
JCLF2BLD	Skeleton for JCL member JCLF2BLD
JCLF5CNT	Skeleton for JCL member JCLF5CNT
JCLGCBGO	Skeleton for JCL member JCLGCBGO
JCLGCOB	Skeleton for JCL member JCLGCOB
JCLGDEF	Skeleton for JCL member JCLGDEF
JCLGDESC	Skeleton for JCL member JCLGDESC
JCLGENCB	Skeleton for JCL member JCLGENCB
JCLGENER	JCL to unload media file JCLINST
JCLGPL1	Skeleton for JCL member JCLGPL1
JCLINDX	Skeleton for JCL member JCLINDX
JCLINST	Skeleton for JCL member JCLINST
JCLINST	JCL to allocate and unload all delivery media files
JCLMU	Skeleton for JCL member JCLMU
JCLMUDEP	Skeleton for JCL member JCLMUDEP
JCLMUFIL	Skeleton for JCL member JCLMUFIL
JCLMUPLX	Skeleton for JCL member JCLMUPLX
JCLPEP	Skeleton for JCL member JCLPEP
JCLPERS	Skeleton for JCL member JCLPERS
JCLPL1	Skeleton for JCL member JCLPL1
JCLPROCL	Skeleton for JCL member JCLPROCL
JCLQXPFC	Skeleton for JCL member JCLQXPFC
JCLQXPFT	Skeleton for JCL member JCLQXPFT
JCLQXZAP	Skeleton for JCL member JCLQXZAP
JCLRELNK	Skeleton for JCL member JCLRELNK
JCLSCF	Skeleton for JCL member JCLSCF
JCLSET	Skeleton for JCL member JCLSET
JCLSVC	Skeleton for JCL member JCLSVC

<i>Member Name</i>	<i>Description</i>
JCLS2KIV	JCL to assemble and execute installation macro S2KIVJCL
JCLS2KLN	Skeleton for JCL member JCLS2KLN
JCLS2OP	Skeleton for JCL member JCLS2OP
JCLVALID	Skeleton for JCL member JCLVALID
JCLVSAM	Skeleton for JCL member JCLVSAM
JCLXAUTH	Skeleton for JCL member JCLXAUTH
JCLXBUF	Skeleton for JCL member JCLXBUF
JCLZAP	Skeleton for JCL member JCLZAP
KEYTABLE	CICS Command Editor macro
LIBDEFN	Command File to create LIBRARY database and run SCF validation
LIBLDER	Loader string data for LIBRARY database
LISTSCRN	Macro
LSTCOMM	Macro
MACACT	Macro to generate job JCLACT
MACACTDB	Macro to generate job JCLACTCB
MACALLOC	Macro to generate job JCLALLOC
MACAQURU	Macro to generate job JCLAQURU
MACARPRU	Macro to generate job JCLARPMU
MACASM	Macro to generate job JCLASM
MACBACK	Macro to generate job JCLBACK
MACBSS2K	Macro to generate proc SASS2K
MACB2KMU	Macro to generate proc S2KMU
MACB2KSU	Macro to generate proc S2KSU
MACCEDIT	Macro to generate job JCLCEDIT
MACCFIND	Macro to generate job JCLCFIND
MACCICS	Macro to generate job JCLCICS
MACCIZAP	Macro to generate job JCLCIZAP
MACCNVRT	Macro to generate job JCLCNVRT
MACCOB	Macro to generate job JCLCOB
MACCPLEX	Macro to generate job JCLCPLEX
MACCSCF	Macro to generate job JCLCSCF
MACCSDU	Macro to generate job JCLCSDU
MACDEL	Macro to generate job JCLDEL
MACDEMO	Macro to generate DEMOFILE CLIST
MACDIAG	Macro to generate job JCLDIAG
MACDIAGX	Macro to generate job JCLDIABX
MACDOC	Macro to generate job JCLDOC
MACDUMP	Macro to generate job JCLDUMP
MACEMP	Macro to generate job JCLEMP
MACEXAM	Macro to generate job JCLEXAM
MACEXINX	Macro to generate job JCLEXINX
MACEXIT	Macro to generate job JCLEXIT
MACFFDI	Macro to generate job JCLFFDI
MACFORT	Macro to generate job JCLFORT
MACFRDB	Macro to generate S2KFRDB CLIST
MACFRDBH	Macro to generate S2KFRDB Help file
MACF2BLD	Macro to generate JCLF2BLD
MACF5CNT	Macro to generate job JCLF5CNT
MACGCBGO	Macro to generate job JCLGCBGO

<i>Member Name</i>	<i>Description</i>
MACGCOB	Macro to generate job JCLGCOB
MACGDEF	Macro to generate job JCLGDEF
MACGDESC	Macro to generate job JCLGDESC
MACGENCB	Macro to generate job JCLGENCB
MACGENIH	Macro to generate Genius Help file
MACGNIUS	Macro to generate Genius CLIST
MACGPL1	Macro to generate job JCLGPL1
MACINST	Macro to generate job JCLIST
MACINDX	Macro to generate job JCLINDX
MACMU	Macro to generate job JCLMU
MACMUDEP	Macro to generate job JCLMUDEP
MACMUFIL	Macro to generate job JCLMUFIL
MACMUPLX	Macro to generate job JCLMUPLX
MACPEP	Macro to generate job JCLPEP
MACPERS	Macro to generate job JCLPERS
MACPL1	Macro to generate job JCLPL1
MACPROCL	Macro to generate job JCLPROCL
MACRELNK	Macro to generate job JCLRELNK
MACSAS2K	Macro to generate SASS2K CLIST
MACSCF	Macro to generate job JCLSCF
MACSET	Macro to generate job JCLSET
MACSS2KH	Macro to generate SASS2K Help file
MACSVC	Macro to generate job JCLSVC
MACS2K	Macro to generate S2K CLIST
MACS2KH	Macro to generate S2K Help file
MACS2KM	Macro to generate Multi-User CLIST
MACS2KMH	Macro to generate Multi-User Help
MACS2KLN	Macro to generate job JCLS2KLN
MACS2OP	Macro to generate job JCLS2OP
MACVALID	Macro to generate job JCLVALID
MACVSAM	Macro to generate job JCLVSAM
MACXAUTH	Macro to generate job JCLXAUTH
MACXBUF	Macro to generate job JCLXBUF
MACZAP	Macro to generate job JCLZAP
MAC2KFR	Macro to generate job S2KFREE CLIST
MA2KFRH	Macro to generate S2KFREE Help file
MAPAID	Macro
MQXALCAT	Macro to generate job JCLALCAT
MQXQUEX	Macro to generate QUEX CLIST
MQXQUEXH	Macro to generate QUEXH Help file
MQXQUVB	Macro to generate QUVB CLIST
MQXQUVBH	Macro to generate QUVBH Help file
MQXZAP	Macro to generate job JCLQXZAP
MRISVC	Macro for SVC assembly
MUPARM	Skeleton for Multi-User Parm File
MUSVC	Assembler interface program
NLERRORS	Macro
NLPARM	Skeleton for Single-User Parm File
OAID	Macro
OPENWAIT	Assembler program for Special Zap 161
OUTBLD	CICS Command Editor module
PARSE	Macro for XBUF assembly

<i>Member Name</i>	<i>Description</i>
PERSDEFN	Command File to create PERSONNEL database
PERSLDER	Loader string data for PERSONNEL database
PGMST	Macro for Multi-User Accounting Log programs
PLIINPUT	Input records to drive PLEX validation programs
PLXCOMA	Macro
PLXCOMC	Macro
PLXCOMP	Macro
PLXFRMT	CICS command-level PLEX module
PLXPBLD	CICS command-level PLEX module
PLXTRUE	STOP S2K for procedural language users
PLICCL	PL/I command-level validation program
PUBDEFN	Command File to create PUBLISHERS database
PUTONQ	Macro for SVC assembly
QUEX	Skeleton for TSO CLIST
QUEXH	Skeleton for QUEX CLIST Help file
QUVB	Skeleton for TSO CLIST QUVB
QUVBH	Skeleton for QUVB CLIST Help file
ROLBACK1	Command File for rollback validation
ROLBACK2	Command File for rollback validation
ROLBACK3	Command File for rollback validation
RWPARM	Skeleton for Report Writer Parm File
SASASCE	Assembler source program for assembler PLEX test
SASCBCE	COBOL source program for COBOL PLEX test
SASFOCE	VS FORTRAN source program for FORTRAN PLEX test
SASPLCE	PL/I source program for PL/I PLEX test
SASS2K	Skeleton for SAS CLIST Additions for SYSTEM 2000
SASS2KH	Skeleton for SASS2K CLIST Help file
SASS2KP	Skeleton for SAS JCL PROC Changes for SYSTEM 2000
SCFCOMM	Macro
SCFDRVR	CICS command-level SCF module
SCFERROR	CICS command-level SCF module
SCFINTF	CICS command-level SCF module
SCFPGBD	CICS command-level SCF module
SCFPGMG	CICS command-level SCF module
SETBTEXT	S2KSETI parameters
SETCTEXT	S2KSETI parameters
SETEXIT	Macro to enable and address one or more user exits
SETMODE	CICS Command Editor module
SETMTEXT	S2KSETI parameters
SETQTEXT	S2KSETI parameters
SETREV	Assembler macro used during assembly of ALC routines
SETUPCI	Macro
SZ	SYSTEM 2000 special zaps
S2ABEND	Macro
S2GMAIN	Macro
S2IDUSR	Macro
S2INLOC	Macro
S2K	Skeleton for TSO CLIST S2K
S2KADRC	SVC communication module
S2KCGICH	CGI Web interface object module
S2KCGID	CGI Web interface object module

<i>Member Name</i>	<i>Description</i>
S2KCGIDB	CGI Web interface object module
S2KCGIDH	CGI Web interface object module
S2KCGIO	CGI Web interface object module
S2KCGIOH	CGI Web interface object module
S2KCGIOP	CGI Web interface object module
S2KCSO	CICS RDO table definitions
S2KCUSE	Assembler source for CICS user module
S2KDCO	CICS table for Destination Control Table
S2KDLT	CICS Command Editor module
S2KDSPL	CICS Command Editor module
S2KEDTRT	CICS Command Editor module
S2KEND	CICS Command Editor module
S2KEPROC	CICS Command Editor module
S2KERR	CICS Command Editor module
S2KEXIN	Source for S2KEXIN to implement user exit methodology
S2KEX07	User-exit source to specify multiple local hold buffer size
S2KEX13	User-exit source to inspect input SCF records
S2KEX42	User-exit source to clean up resources acquired by user exits
S2KEX45	User-exit to interface with RACF
S2KFINO	CICS Command Editor module
S2KFRDB	Skeleton for TSO CLIST S2KFRDB
S2KFRDBH	Skeleton for S2KFRDB CLIST Help file
S2KFREE	Skeleton for TSO CLIST S2KFREE
S2KFREEH	Skeleton for S2KFREE CLIST Help file
S2KGET	CICS Command Editor module
S2KGLOAD	PL/I source program for COBOL load program
S2KGUNLD	PL/I source program for COBOL unload program
S2KH	Skeleton for S2K CLIST Help file
S2KHLPFK	S2KIVR PF key definitions
S2KINS	CICS Command Editor module
S2KIVHLP	Primary HELP for S2KIVR application
S2KIVH01	Help for Output JCL DSNAME field of panel S2KIVPNL
S2KIVH02	Help for FT Skeleton Library Name field of panel S2KIVPNL
S2KIVH03	Help for ISPF Panel Library Name field of panel S2KIVPNL
S2KIVH04	Help for Job Accounting Information field of panel S2KIVPNL
S2KIVH05	Help for Generate User-Supplied JCL Members field of panel S2KIVPNL
S2KIVH06	Help for five JCL Statement fields of panel S2KIVPNL
S2KIVH07	Help for Base Product Installation field of panel S2KIVPNL
S2KIVH08	Help for Multi-User Product installation field of panel S2KIVPNL
S2KIVH09	Help for Multi-User SVC Number field of panel S2KIVPNL
S2KIVH10	Help for XMS Installation field of panel S2KIVPNL
S2KIVH11	Help for CICS Interface Installation field of panel S2KIVPNL
S2KIVH12	Help for CICS Version field of panel S2KIVPNL
S2KIVH13	Help for QueX Installation field of panel S2KIVPNL
S2KIVH14	Help for Printer Output Class field of panel S2KIVPNL
S2KIVH15	Help for Work File DASD Unit Type field of panel S2KIVPNL
S2KIVH16	Help for Linkage Editor Program Name field of panel S2KIVPNL
S2KIVH17	Help for Assembler Program Name field of panel S2KIVPNL
S2KIVH18	Help for COBOL Compiler Name field of panel S2KIVPNL
S2KIVH19	Help for PL/I Compiler Name field of panel S2KIVPNL

<i>Member Name</i>	<i>Description</i>
S2KIVH20	Help for Fortran Compiler Name field of panel S2KIVPNL
S2KIVH21	Help for Release Level of Fortran Compiler field of panel S2KIVPNL
S2KIVH22	Help for SYSTEM 2000 Load Library field of panel S2KIVPNL
S2KIVH23	Help for SYSTEM 2000 Source Library field of panel S2KIVPNL
S2KIVH24	Help for SYSTEM 2000 Validation Library field of panel S2KIVPNL
S2KIVH25	Help for SYSTEM 2000 JCL Library field of panel S2KIVPNL
S2KIVH26	Help for Single-User Parm File Data Set field of panel S2KIVPNL
S2KIVH27	Help for Single-User Parm File Member Name field of panel S2KIVPNL
S2KIVH28	Help for S2KPAD File Volume Serial field of panel S2KIVPNL
S2KIVH29	Help for Database Name High-Level Qualifier field of panel S2KIVPNL
S2KIVH30	Help for Database VSAM CI Size field of panel S2KIVPNL
S2KIVH31	Help for Database File Volume Serial field of panel S2KIVPNL
S2KIVH32	Help for TSO CLIST Library field of panel S2KIVPNL
S2KIVH33	Help for TSO Help Library field of panel S2KIVPNL
S2KIVH34	Help for Cataloged Procedure Library field of panel S2KIVPNL
S2KIVH35	Help for MVS System Macro Library field of panel S2KIVPNL
S2KIVH36	Help for MVS System Generation Macro Library field of panel S2KIVPNL
S2KIVH37	Help for MVS Authorized Library field of panel S2KIVPNL
S2KIVH38	Help for COBOL Compiler Load Library field of panel S2KIVPNL
S2KIVH39	Help for PL/I Compiler Load Library field of panel S2KIVPNL
S2KIVH40	Help for PL/I Link Library field of panel S2KIVPNL
S2KIVH41	Help for PL/I Run Time Library field of panel S2KIVPNL
S2KIVH42	Help for Fortran Compiler Load Library field of panel S2KIVPNL
S2KIVH43	Help for Fortran Link Library field of panel S2KIVPNL
S2KIVH44	Help for LE/370 Link Library field of panel S2KIVPNL
S2KIVH45	Help for S2KCOM File Data Set Name field of panel S2KIVPNL
S2KIVH46	Help for S2KCOM File Volume Serial field of panel S2KIVPNL
S2KIVH47	Help for Accounting Log File High Level Qualifier field of panel S2KIVPNL
S2KIVH48	Help for Accounting Log File Volume Serial field of panel S2KIVPNL
S2KIVH49	Help for Accounting Log File DASD Unit Type field of panel S2KIVPNL
S2KIVH50	Help for Accounting Log File Block Size field of panel S2KIVPNL
S2KIVH51	Help for Accounting Log File Primary Space Amount field of panel S2KIVPNL
S2KIVH52	Help for Web Interface CGI-BIN Library Name field of panel S2KIVPNL
S2KIVH53	Help for CICS Command Editor DSNAME field of panel S2KIVPNL
S2KIVH54	Help for CICS Load Library field of panel S2KIVPNL
S2KIVH55	Help for CICS Macro Library field of panel S2KIVPNL
S2KIVH56	Help for CICS COBOL Link Library field of panel S2KIVPNL
S2KIVH57	Help for CICS PL/I Link Library field of panel S2KIVPNL
S2KIVPFK	S2KIVR PF key definitions
S2KIVPNL	Main S2KIVR ISPF panel
S2KIVPOP	Pop-up panel within S2KIVPNL panel
S2KIVJCL	Macro to generate all installation JCL
S2KIVR	Batch JCL Generator REXX exec
S2KIVRMN	Batch JCL Generator REXX exec
S2KLIST	CICS list transaction module
S2KLISTD	CICS Command Editor module
S2KLOG	CICS program to display error activities
S2KM	Skeleton for TSO CLIST S2KM
S2KMDFY	CICS Command Editor module
S2KMH	Skeleton for S2KM CLIST Help file
S2KMRO	CICS program to handle DFHZNEP errors in AOR's

<i>Member Name</i>	<i>Description</i>
S2KMUP	Skeleton for Multi-User JCL cataloged procedure
S2KOSCRN	CICS interface screen input utility program
S2KPEP	Assembler interface program for Program Error Program
S2KPFKY	CICS user PF key definition module
S2KPTR	CICS Command Editor module
S2KRESET	CICS command-level utility program
S2KRETRN	CICS Command Editor module
S2KSAVE	CICS Command Editor module
S2KSBMT	CICS Command Editor module
S2KSCR	CICS Command Editor module
S2KSEND	CICS Command Editor module
S2KSETPF	CICS Command Editor module
S2KSRT	CICS table for System Recovery Table
S2KSUP	Skeleton for the Single-User JCL cataloged procedure
S2KSVC	Macro
S2KTERM	CICS program to terminate a user from Multi-User
S2KUGEN	Macro
S2KWCOM	Macro for CICS Web interface
S2KWCOMC	Macro for CICS Web interface
S2KWEBD	CICS Web interface program
S2KWEBTO	CICS Web interface timeout program
S2KWERR	Web interface HTML
S2KWEXIT	Web interface HTML
S2KWFOOT	Web interface HTML
S2KWFORM	Web interface HTML
S2KWHEAD	Web interface HTML
S2KWLGF	Web interface HTML
S2KWLGH	Web interface HTML
S2KWLOG	CICS Web stats display interface
S2KWMENU	Web interface HTML
S2KWOPER	Web interface HTML
S2KWOPRF	Web interface HTML
S2KWSTAA	Web interface HTML
S2KWSTAD	Web interface HTML
S2KWSTAF	Web interface HTML
S2KWSTAH	Web interface HTML
S2KWSTAT	CICS Web user display interface
S2KZNEP	Additional Network Error Program statements
S2LOCK	Macro
S2RTRN	Macro
S2TWRTT	Macro
S2WTO	Macro
S2WTOMSG	Macro
TESTRW1	Command file for Report Writer validation
TGEN	Macro
TRACER	Macro
UPKEEP	Source program for Update Log and Keepfile inspection
USERID	CICS Command Editor module
VERNO	Macro
XB	Macro for XBUF assembly
XBDD	Macro for XBUF assembly
XBDDADD	Macro for XBUF assembly

<i>Member Name</i>	<i>Description</i>
<i>XBDDVER</i>	<i>Macro for XBUF assembly</i>
<i>XBLKSIZE</i>	<i>Macro for XBUF assembly</i>
<i>XBMEMORY</i>	<i>Macro for XBUF assembly</i>
<i>XBNUM</i>	<i>Macro for XBUF assembly</i>
<i>XBUF</i>	<i>Macro for XBUF assembly</i>
<i>XBUFCB</i>	<i>Macro for XBUF assembly</i>
<i>XBUFTBL</i>	<i>Sample XBUF table</i>
<i>XBUFX0</i>	<i>Macro for XBUF assembly</i>
<i>XBUFX1</i>	<i>Macro for XBUF assembly</i>
<i>XBUFX2</i>	<i>Macro for XBUF assembly</i>
<i>XEQUIREGS</i>	<i>Macro for register EQUs</i>

Appendix D: Library S2K.V2.CNTL

These members are added to your CNTL library when you run the S2KIVR application.

<i>Member Name</i>	<i>Description</i>
DEMOFILE	CLIST to set up demo database files
GENIUS	CLIST to execute Genius validation CLISTs
GENIUSH	Help file for Genius
JCLACT	JCL to build Accounting Log files
JCLACTCB	JCL to COBOL II compile and link AQUMAIN and ARPMAIN
JCLALCAT	JCL to create QUEXCATALOG database
JCLALLOC	JCL to preallocate validation database files
JCLAQURU	JCL to execute AQUMAIN program
JCLARPRU	JCL to execute ARPMAIN program
JCLASM	JCL to validate assembler PLEX
JCLBACK	JCL to create backup tape
JCLCEDIT	JCL to assemble/link Command Editor programs
JCLCFIND	JCL to execute the CFIND program
JCLCICS	JCL to be added to your CICS startup deck
JCLCIZAP	JCL to zap SVCADR in the CICS interface
JCLCLUZ	JCL to zap userid for S2KEDIT
JCLCL01	JCL to assemble/link interface programs
JCLCL02	JCL to compile/link COBOL command-level programs
JCLCL03	JCL to compile/link PL/I command-level programs
JCLCL04	JCL to assemble/link assembler command-level validation
JCLCNVRT	JCL to convert databases to Version 2
JCLCOB	JCL to validate COBOL PLEX
JCLCPLEX	JCL to assemble/link CICS PLEX modules
JCLCSCF	JCL to assemble/link CICS SCF modules
JCLCSDU	JCL to update the CICS DFHCSD File
JCLDEL	JCL to delete validation database files
JCLDIAG	JCL to compile and link DIAG2000
JCLDIAGX	JCL to execute DIAG2000
JCLDOC	JCL to print installation instructions
JCLDUMP	JCL to execute the DUMPXX program
JCLEMP	JCL to create EMPLOYEE database
JCLEXAM	JCL to execute the EXAMINE overflow program
JCLEXINX	JCL to execute the EXAMINDX program
JCLEXIT	JCL to assemble exits 7, 14, and 32
JCLFFDI	JCL to copy a field fix distribution to disk
JCLFORT	JCL to validate FORTRAN PLEX (VS FORTRAN R2 and greater)
JCLF2BLD	JCL to execute the F2BUILD program
JCLF5CNT	JCL to execute the RECHAIN program
JCLGCBGO	JCL to execute the generated COBOL UNLOAD and LOAD programs
JCLGDEF	JCL to define a database using DESCRIBE/DEFINE output
JCLGDESC	JCL to create files for DESCRIBE and DESCRIBE/DEFINE output
JCLGENCB	JCL to generate the COBOL UNLOAD and LOAD programs

<i>Member Name</i>	<i>Description</i>
JCLGPL1	JCL to compile and link S2KGLOAD and S2KGUNLD
JCLINDEX	JCL to execute the INDEXRPT program
JCLINST	JCL to allocate and unload all delivery media files
JCLMU	JCL to initialize Multi-User software
JCLMUDEP	JCL to validate Multi-User software
JCLMUFIL	JCL to allocate permanent S2KPADnn and S2KUSERS files
JCLMUPLX	JCL to validate Multi-User PLEX
JCLPEP	JCL to assemble DFHPEP
JCLPERS	JCL to create PERSONNEL database
JCLPL1	JCL to validate PL/I PLEX
JCLPROCL	JCL to copy CLISTs, JCL procs, and Help files to site libraries
JCLQXPFC	JCL to zap QueX PF key settings for CICS
JCLQXPFT	JCL to zap QueX PF key settings for TSO
JCLQXZAP	JCL to zap Multi-User SVC number in QueX
JCLRELNK	JCL to clear the IDR table in a load module
JCLSCF	JCL to validate SCF and RW
JCLSET	JCL to execute S2KSETI utility
JCLSVC	JCL to assemble and install Multi-User SVC (SVC Multi-User only)
JCLS2KLN	JCL to link S2EXIT with SYS2K
JCLS2OP	JCL to execute the S2OP program
JCLVALID	JCL to list the contents of the VALID library
JCLVSAM	JCL to create a VSAM file
JCLXAUTH	JCL to install XMS SYSTEM 2000 code (XMS Multi-User only)
JCLXBUF	JCL to create an XBUF table
JCLZAP	JCL to apply zap for Multi-User SVC number
MUPARM	Multi-User execution parameters
NLPARM	Execution parm data set for validation
QUEX	CLIST to execute the QueX software
QUEXH	QueX CLIST Help file
QUVB	CLIST to execute the QueX User View Builder
QUVBH	QUVB CLIST Help file
RWPARAM	Execution parm data set for RW validation without USI
SASS2K	CLIST to execute SAS software and allocate SYSTEM 2000 files
SASS2KH	Help file for SASS2K CLIST
SASS2KP	JCL proc to execute SAS software and allocate SYSTEM 2000 files
S2K	CLIST to execute SYSTEM 2000 software
S2KFRDB	CLIST to free database files
S2KFRDBH	Help file for S2KFRDB CLIST
S2KFREE	CLIST to free non-database SYSTEM 2000 files
S2KFREEH	Help file for S2KFREE CLIST
S2KH	Help file for S2K CLIST
S2KM	CLIST for Multi-User-dependent region SCF
S2KMH	Help file for S2KM CLIST
S2KMUP	JCL proc to execute SYSTEM 2000 Multi-User interface
S2KSUP	JCL proc to execute SYSTEM 2000 software

Appendix E: Library S2K.V2.VALID

Member Name	Description
ASMVAL	Output from assembler PLEX validation
COBVAL	Output from COBOL PLEX validation
FORTVAL	Output from FORTRAN PLEX validation
PLIVAL	Output from PL/I PLEX validation
SCFVAL	Output from SCF validation

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