

IBM Sterling Connect:Enterprise for z/OS

Installation Guide

Version 1.5



This edition applies to the 1.5 Version of IBM® Sterling Connect:Enterprise® for z/OS® and to all subsequent releases and modifications until otherwise indicated in new editions.

Before using this information and the product it supports, read the information in *2011Notices* on page 85.

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Before You Begin

This chapter describes defining an APF-authorized load library and modifying VTAM for SNA transmissions.

Defining an APF-Authorized Load Library

Before installing IBM® Sterling Connect:Enterprise® for z/OS®, you must define the Sterling Connect:Enterprise load library (ENTPRS.LOAD or any library file name you choose) and the VOLSER in the IEAAPFxx or PROGxx member of SYS1.PARMLIB as an APF-authorized library.

Modifying VTAM for SNA Data Transmissions

If you want to use Sterling Connect:Enterprise to send SNA data transmissions, you must modify VTAM. The following procedures describe the modifications required to use Sterling Connect:Enterprise with SNA:

- ◆ *Defining Sterling Connect:Enterprise as a VTAM Application Program* on page 8
- ◆ *Defining Switched Nodes to Access Sterling Connect:Enterprise* on page 8
- ◆ *Defining a USS Table to Convert Unformatted Logons* on page 10
- ◆ *Defining Session Parameters in a Logon Mode Table* on page 11
- ◆ *Defining the Sterling Connect:Enterprise APPC VTAM Application* on page 13
- ◆ *Defining a Log Mode Entry for the APPC Interface* on page 14
- ◆ *Generating Network Control Program (NCP) Information* on page 15

Some of these modifications may not be required for your system, or may have already been done to support other VTAM applications.

Each VTAM modification is described in the following sections.

Defining Sterling Connect:Enterprise as a VTAM Application Program

Create the following statement in your VTAM list library to define Sterling Connect:Enterprise as an application program:

APPLNOD1	VBUILD	TYPE=APPL	72
ENTPRS APPL	ACBNAME=ENTPRS,		X
	AUTH=(ACQ),		X
	EAS=20,		X
	VPACING=7,		X
	PARSESS=YES		

The following table describes the previously listed required parameters:

Parameter	Description
ACBNAME=ENTPRS	Specifies the application program name, which can be any name, up to eight characters long. Make a note of this name, because it is used later during installation. The ACBNAME is also specified by remote sites when they log on to Sterling Connect:Enterprise.
AUTH=(ACQ)	Permits remote applications to issue the VTAM macros that establish a session with Sterling Connect:Enterprise. The required parameter value is ACQ.
EAS=20	Specifies the approximate number of concurrent sessions Sterling Connect:Enterprise can have with its logical units. Specify an EAS value that is 10% or 20% greater than your estimated number of sessions.
VPACING=7	Limits the number of buffers queued at any time on a session. Set the VPACING value to 7 to avoid degrading network performance.
PARSESS=YES	Allows parallel session support between two or more Sterling Connect:Enterprise systems. The required parameter value is YES.

Defining Switched Nodes to Access Sterling Connect:Enterprise

If any of your remote sites access Sterling Connect:Enterprise over a switched network, you must define the switched nodes in the VTAM definition library to access Sterling Connect:Enterprise. You may not have to do this if the remote sites are already defined for another VTAM application program, such as JES2. If they are already defined, verify that the parameters used are compatible with the Sterling Connect:Enterprise requirements.

Sterling Connect:Enterprise supports LU Type 1 devices typically used for RJE-type applications. This includes IBM 3770s and IBM compatible PCs running the IBM SNA RJE support. The installation instructions with these products explain how to define them as VTAM switched nodes.

To define a switched major node and separate PU, PATH, and LU statements for each minor node, create a VBUILD statement in your VTAM list library based on the following example:


```

*****
*          SYS1.VTAMLST (SWITCH1)          *
*****
*
SWITCH1    VBUILD    TYPE=SWNET,           X
              MAXNO=2,           X
              MAXGRP=2
*
PUDALLAS   PU ADDR=C1,           X
              IDNUM=00000,       X
              IDBLK=03D,         X
              PUTYPE=2,          X
              MAXPATH=3,         X
              DISCNT=YES,        X
              MODETAB=MODETAB1, X
              DLOGMOD=RJE3770,  X
              ISTATUS=ACTIVE,    X
              MAXDATA=265,       X
              MAXOUT=7,          X
              PACING=7,          X
              PASSLIM=7,         X
              SSCPFM=USSSCS,     X
              VPACING=2,         X
              USSTAB=USSTAB1
*
PATH01     PATH     DIALNO=(12145551212*), X
              PID=1,            X
              GID=1,            X
              GRPNM=SDLCSW01
*
LUDAL001   LU       LOCADDR=1
LUDAL002   LU       LOCADDR=2
LUDAL003   LU       LOCADDR=3
LUDAL004   LU       LOCADDR=4
LUDAL005   LU       LOCADDR=5
*
*****
*          END OF SWITCH1 DEFINITION      *
*****
72

```

The following table describes some of the key parameters in the definition. For a list of all parameters, see the IBM VTAM documentation.

Parameter	Definition
MODETAB, DLOGMODE, and USSTAB	These are optional parameters. They offer a convenient way to identify the correct session parameters and USS LOGON format. These parameters are used later in the USS Table Definition and Logon Mode Table Entry tasks.
PATH statement	Defines a dial-out path to the Physical Unit (PU), specifying the remote site telephone number and the NCP line group name used in dialing the site. A PATH statement is required if the Sterling Connect:Enterprise Auto Connect function is used for host-initiated connection to the remote site.
LUDAL001...LUDAL005	Logical Unit (LU) definitions. In this example, five LUs are defined for the single PU. Sterling Connect:Enterprise supports Multiple Logical Unit (MLU) and provides for up to six concurrent sessions per PU.

Defining a USS Table to Convert Unformatted Logons

A remote site or LU in an SNA network must log on to Sterling Connect:Enterprise through VTAM. Sterling Connect:Enterprise requires the following information in the logon:

Parameter	Description
LOGMODE	Name of the logon mode table entry where the session parameters are obtained.
APPLID	Name of the Sterling Connect:Enterprise application program in your APPL definition statement.
DATA	User-supplied data that is used as a remote name for batch identifiers and for Auto Connect session activation.

Logons can be unformatted or formatted. Unformatted logons are a string of characters sent to the host site and then converted using a table during the logon Process. Unformatted logons are typically typed by a user on the keyboard at the remote site, or generated by a configuration Process at the remote site.

The characters in an unformatted logon are formatted or converted by the USS table. To use unformatted logons, you must define the USS table in the VTAM definition library before you install Sterling Connect:Enterprise.

If your remote site can supply the information listed to Sterling Connect:Enterprise as part of a formatted logon, you do not need to define a USS table.

In the following example, a USS table named USSTAB1 enables you to convert unformatted logons. This example shows two methods for the remote site to log on to Sterling Connect:Enterprise. Define USSTAB1 in the VTAM list library.

```

*****
*      USS TABLE FOR Sterling Connect:Enterprise LOGON      *
*****
*
USSTAB1 USSTAB
*
*****
*      LOGON ENTERED BY OPERATOR      *
*      L RMTnnn      *
*
*      USS CONVERTS LOGON TO:      *
*      LOGON APPLID(ENTPRS) LOGMODE(RJE3770) DATA(RMTnnn)  *
*****
*
LOGON  USSCMD  CMD=L,REP=LOGON,FORMAT=BAL
        USSPARM  PARM=P1,REP=DATA
        USSPARM  PARM=APPLID,DEFAULT=ENTPRS
        USSPARM  PARM=LOGMODE,DEFAULT=RJE3770
*
*****
*      LOGON ENTERED BY OPERATOR      *
*      ENTPRS DATA=RMTnnn      *
*
*      USS CONVERTS LOGON TO:      *
*      LOGON APPLID(ENTPRS) LOGMODE(RJE3770) DATA(RMTnnn)  *
*****
*
ENTPRS USSCMD  CMD=ENTPRS,REP=LOGON,FORMAT=BAL
        USSPARM  PARM=APPLID,DEFAULT=ENTPRS
        USSPARM  PARM=LOGMODE,DEFAULT=RJE3770
        USSPARM  PARM=DATA
*
        USSEND
*
*****

```

Regardless of the logon method used, the host site must inform the remote site users of the proper procedures to log on and communicate with Sterling Connect:Enterprise.

Defining Session Parameters in a Logon Mode Table

You must define the parameters that control a session between Sterling Connect:Enterprise and remote sites in a logon mode table entry accessible to Sterling Connect:Enterprise.

When a remote site logs on to Sterling Connect:Enterprise, the logon includes a LOGMODE parameter that identifies the Logon Mode Table entry storing the session parameters. Sterling Connect:Enterprise validates these parameters. If the parameters are not correct, Sterling Connect:Enterprise rejects the logon.

In the example on page 9, the PU specifies the logon mode table MODETAB1 and the logon mode table entry RJE3770. In the example, the USS table uses a LOGMODE default of RJE3770.

SYS1.VTAMLIB must contain the Logon Mode Tables. The following example shows two LOGMODE entries (highlighted in bold):

```

* *          LOGON MODE TABLE "MODETAB1"          *          72
.
.
.
*****
RJE3770    MODEENT    LOGMODE=RJE3770,          X
                        FMPROF=X'03',          X
                        TSPROF=X'03',          X
                        PRIPROT=X'B3',          X
                        SECPROT=X'A3',          X
                        COMPROT=X'7080',        X
                        RUSIZES=X'8585',        X
                        PSERVIC=X'01102000F100E00000010040'
*
*
RJE3770X  MODEENT    LOGMODE=RJE3770X,        X
                        FMPROF=X'03',          X
                        TSPROF=X'03',          X
                        PRIPROT=X'B3',          X
                        SECPROT=X'A3',          X
                        COMPROT=X'7080',        X
                        RUSIZES=X'8585',        X
                        PSERVIC=X'01100000F100E00000010040'
.
.
.

```

The LOGMODE entry RJE3770 is the default value for the session parameters. Because this entry includes the ability to handle transmission of FMH2 for Peripheral Data Information Record (PDIR), it can be used as a default LOGMODE for both Sterling Connect:Enterprise and JES2.

However, some remote sites cannot process PDIR and reject the RJE3770 session parameters. In the example, the LOGMODE entry RJE3770X is provided for remote sites that cannot process PDIR transmission, such as sites using the IBM SNA RJE support package for the IBM PC. If you use the IBM SNA RJE support package with Sterling Connect:Enterprise, your logon must override the default LOGMODE and specify LOGMODE=RJE3770X.

The example also demonstrates the valid session parameters for remote sites that can communicate with Sterling Connect:Enterprise as LU Type 1 RJE devices. The following table lists the acceptable values for those parameters:

Parameter	Acceptable Values
PRIPROT	X'A1' X'A3' X'B1' X'B3'

Parameter	Acceptable Values
SECPROT	X'A0' X'A1' X'A3' X'B0' X'B1' X'B3'

Defining the Sterling Connect:Enterprise APPC VTAM Application

If you use the Sterling Connect:Enterprise CICS interface or the ISPF interface, you must create a separate VTAM APPL for the APPC interface. The APPC interface is the Sterling Connect:Enterprise VTAM LU6.2 connection to CICS and ISPF. CICS and ISPF have corresponding APPL statements in the VTAM definition data set. Consult the *IBM Sterling Connect:Enterprise for z/OS CICS User's Guide* and the *IBM Sterling Connect:Enterprise for z/OS ISPF User's Guide* for more information about this corresponding APPL statement.

This APPL is used by Sterling Connect:Enterprise to initiate sessions with either the CICS or ISPF interface. These sessions are occasionally initiated, even on a busy system, so the values listed in the preceding table are large enough in most cases to handle multiple concurrent users on the interface. The following is an example of a VTAM APPC APPL:

```

* * LU 6.2 APPLS FOR ENTPRS CICS and/or ISPF interface...*      72
MAILAPPL APPL ACBNAME=MAILAPPL,  APPLID FOR ACB                X
      AUTH=(ACQ) ,                                           X
      APPC=YES,                                             X
      PARSESS=YES,                                         X
      VPACING=7,                                           x
      AUTOSSES=6,                                         X
      DLOGMODE=LU62,                                       X
      DMINWNL=3,                                           X
      DMINWNR=3,                                           X
      DRESPL=ALLOW,                                       X
      DDRAINL=ALLOW,                                       X
      DSESLIM=12,                                         X
      EAS=12,                                             X
      MODETAB=MODEAPPC
    
```

Note: This statement must follow the VBUILD statement for the major node in the VTAM definition library.

The following table describes the parameters in the VTAM APPL. Do not change the values unless you thoroughly understand LU6.2 session parameters. For more information, consult your VTAM installation manual.

Parameter	Description
ACBNAME=xxxxxxx	Specifies the 1–8 character VTAM application program name. Make note of the ACBNAME. This name must be supplied later in the *OPTIONS APPCAPPL=statement during ODF setup. It must also be supplied by CICS and ISPF interface users creating connection definitions.
AUTH=(ACQ)	Permits the CICS or ISPF interface to issue the VTAM macros that establish a session with the Sterling Connect:Enterprise.
APPC=YES	Enables Sterling Connect:Enterprise to use APPCCMD macro instructions. The required value is YES.
PARSESS=YES	Enables parallel session support between Sterling Connect:Enterprise and the CICS interface, the ISPF interface, or both. The required value is YES.
VPACING=7	Limits the number of buffers queued at any time on a session. Set this parameter to avoid degrading network performance.
AUTOSES=6	Specifies the maximum number of contention winner sessions. The number of contention winners and losers is determined by a complex set of rules, which is different for both CICS and ISPF.
DLOGMODE=xxxxx	Specifies the name of the logon mode table entry to use as a default. The logon mode table is defined by the VTAM system programmer using the MODEENT macro instruction. You must supply the name of your logon mode table.
DMINWNL=3	Specifies the minimum number of parallel sessions that Sterling Connect:Enterprise is guaranteed to take precedence over CICS or ISPF.
DMINWNR=3	Specifies the minimum number of parallel sessions that CICS or ISPF is guaranteed to take precedence over Sterling Connect:Enterprise.
DRESPL=ALLOW	Tells VTAM that Sterling Connect:Enterprise accepts responsibility for deactivating sessions upon the receipt of a CNOS.
DSESLIM=12 nn	Defines the maximum number of LU6.2 sessions between Sterling Connect:Enterprise and CICS or VTAM or both. Set the DSESLIM value to 12 or higher.
EAS=12 nn	Specifies the approximate number of concurrent sessions Sterling Connect:Enterprise can have with CICS, ISPF, or both. Set the EAS value to 12, or one that is 10% or 20% greater than your estimated number of sessions.
MODETAB=xxxxxxx	Specifies the logon mode table associated with each logon mode name. This table specifies the session parameters used in a session between Sterling Connect:Enterprise and CICS or ISPF. You must supply the name of your logon mode table.

Defining a Log Mode Entry for the APPC Interface

If you use the Sterling Connect:Enterprise CICS interface or the ISPF interface, you must create a Mode Table Entry for the APPC interface. The following is an example of a Mode Table Entry for the APPC interface. For parameter descriptions or definitions see the IBM VTAM documentation.

```

MODEAPPC TITLE      'LU 6.2 MODETAB'                                72
      EJECT
MODEAPPC MODETAB
*
* LU 6.2 MODETAB      IMAGES
LU62      MODEENT      LOGMODE=LU62,FMPROF=X'13',TSPROF=X'07',      X
      SECPROT=X'B0',COMPROT=X'D0B1',RUSIZES=X'8989',      X
      PRIPROT=X'B0',PSERVIC=X'060200000000000000000300'
SNASVCMG MODEENT      LOGMODE=SNASVCMG,FMPROF=X'13',TSPROF=X'07',      X
      SECPROT=X'B0',COMPROT=X'D0B1',RUSIZE=X'8989',      X
      PRIPROT=X'B0',PSERVIC=X'060200000000000000000300'
      MODEND
      END
    
```

Generating Network Control Program (NCP) Information

An NCP generation may be required to use SNA LU Type 1 RJE devices with Sterling Connect:Enterprise. If these devices are included in an NCP generation for JES2, you may not have to perform this again as the Sterling Connect:Enterprise NCP requirements are nearly identical to the JES2 requirements. However, if you are using the Sterling Connect:Enterprise Auto Connect function for host-initiated calls to remote sites on switched lines, you must specify CALL=INOUT on one or more LINE statements for switched lines. If your network supports LU type 1 RJE devices with JES2, other NCP changes are probably not necessary. Verify with your VTAM programmer to determine if changes are needed.

The installation instructions that accompany your remote devices explain how to define them in your NCP generation. Refer to them or to the appropriate IBM manuals for more information about NCP generation. Chapter 10, *Setting Up Connections to Other Communications Products*, in the *IBM Sterling Connect:Enterprise for z/OS Administration Guide* supplies a sample NCP generation that supports LU Type 1 RJE devices on dedicated or switched lines.

Unloading the Distribution Tape

This chapter describes the contents of the distribution tape and how to unload it. Before you begin the unload procedure, review *IBM Sterling Connect:Enterprise for z/OS Release Notes* to ensure that your system meets all requirements.

Contents of the Distribution Tape

The Sterling Connect:Enterprise distribution tape has standard labels and contains the files listed in the following table:

Distribution File	Contents
CE.DUMMY	Reserved for maintenance readme information.
CE.EXAMPLE	Sterling Connect:Enterprise example library that contains sample scripts and jobs.
CE.OBJECT	The Sterling Connect:Enterprise object modules.
CE.SOURCE	Macros required to install Sterling Connect:Enterprise on your system. Only required macros are released in the CE.SOURCE file. Most of Sterling Connect:Enterprise is not released in source form.
CE.LOAD	The link-edited Sterling Connect:Enterprise load modules. Contains all the necessary load modules.
CEISPF.ISPLLIB	Contains the ISPF load library.
CEISPF.ISPPLIB	Contains the ISPF panel library.
CEISPF.ISPSLIB	Contains the ISPF skeleton library.
CEISPF.ISPMLIB	Contains the ISPF message library.

Distribution File	Contents
CEISPF.ISPTLIB	Contains the ISPF table library.
CEISPF.VSAM	Contains the ISPF administration file data records.
CECICS.LOAD	Contains the link-edited CICS interface load modules. The load modules must reside in a library that is defined by DFHRPL in your CICS system startup JCL.
CECICS.VSAM	Contains the CICS administration file records.
CE.MIB	Management Information Base needed for SNMP traps.

The first file is reserved for Sterling Connect:Enterprise maintenance readme information. The CE.EXAMPLE, CE.OBJECT, CE.SOURCE, and CE.LOAD files must be unloaded to provide access to the library that contains example jobs and scripts and to those other components that enable you to complete the installation and configuration. See *Unloading the Distribution Tape and Allocating Libraries* on page 18 for instructions to unload the tape and an example JCL.

Unloading the Distribution Tape and Allocating Libraries

The example JCL included in this section allocates the Sterling Connect:Enterprise libraries and creates the output files listed in the following table. Sterling Connect:Enterprise documentation uses the data set names listed in the table. You can preallocate the libraries and name them according to your internal naming conventions.

DSN	FORMAT	LRECL	BLKSIZE	DIR.BLOCKS
ENTPRS. EXAMPLE	FB	80	6320	30
ENTPRS. OBJECT	FB	80	3200	250
ENTPRS. SOURCE	FB	80	6144	300
ENTPRS. LOAD	U	0	6144	100
ENTPRS.MIB	VB	256	32760	-

To unload the Sterling Connect:Enterprise distribution tape to your system libraries:

1. Create the JCL on page 19.
2. Follow the instructions in the example JCL on page 19 and modify the following parameters as required for your system:
 - ◆ VOL=SER=
 - ◆ UNIT=
 - ◆ If you rename the libraries, modify the output DSN= parameter.

3. Supply a valid job card and submit the JCL.

```

//JOB CARD JOB PLACE YOUR JOB CARD HERE
//*****
//*      IEBCOPY/IEBGENER UNLOAD OF Sterling Connect:Enterprise TAPE
//*      REPLACE XXXX WITH VALID UNIT TYPE
//*****
//STEP01 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//EXIN DD DISP=SHR, DSN=CE.EXAMPLE, VOL=(, RETAIN, SER=ENTPRS),
// UNIT=3480, LABEL=2
//EXOUT DD DSN=ENTPRS.EXAMPLE,
// DISP=(, CATLG, DELETE), UNIT=XXXX,
// SPACE=(TRK, (30, 2, 30))
//OBIN DD DISP=SHR, DSN=CE.OBJECT, VOL=(, RETAIN, SER=ENTPRS),
// UNIT=3480, LABEL=3
//OBOUT DD DSN=ENTPRS.OBJECT,
// DISP=(, CATLG, DELETE), UNIT=XXXX,
// SPACE=(TRK, (500, 2, 250))
//SOIN DD DISP=SHR, DSN=CE.SOURCE, VOL=(, RETAIN, SER=ENTPRS),
// UNIT=3480, LABEL=4 //SOOUT DD DSN=ENTPRS.SOURCE,
// DISP=(, CATLG, DELETE), UNIT=XXXX,
// SPACE=(TRK, (750, 2, 150))
//SOOUT DD DSN=ENTPRS.SOURCE,
// DISP=(, CATLG, DELETE), UNIT=XXXX,
// SPACE=(TRK, (750, 2, 150))
//LOIN DD DISP=SHR, DSN=CE.LOAD, VOL=(, RETAIN, SER=ENTPRS),
// UNIT=3480, LABEL=5
//LOOUT DD DSN=ENTPRS.LOAD,
// DISP=(, CATLG, DELETE), UNIT=XXXX,
// SPACE=(TRK, (400, 2, 75))
//SYSUT3 DD UNIT=SYSDA, SPACE=(CYL, (5, 5), RLSE)
//SYSUT4 DD UNIT=SYSDA, SPACE=(CYL, (5, 5), RLSE)
//SYSIN DD *
C O=EXOUT, I=EXIN
C O=OBOUT, I=OBIN
C O=SOOUT, I=SOIN
C O=LOOUT, I=LOIN
/*
//STEP02 EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
//SYSUT1 DD DISP=SHR, DSN=CE.MIB, VOL=(, RETAIN, SER=ENTPRS),
// UNIT=3480, LABEL=14
//SYSUT2 DD DSN=ENTPRS.MIB,
// DISP=(, CATLG, DELETE), UNIT=XXXX,
// SPACE=(TRK, (2, 2))

```

4. Go to Chapter 3, *Creating the VSAM File Server*, to continue the installation.

Sterling Connect:Enterprise Example Members

The ENTPRS.EXAMPLE file contains sample jobs and scripts that are referred to throughout the Sterling Connect:Enterprise documentation. The example members are listed in alphabetical order

in the following table. See *CICS Interface Files* on page 24 and *ISPF Interface Files* on page 26 for the contents of the libraries related to the CICS interface and the ISPF interface.

Example Member	Description
\$RCON	Console Application Agent rules example
\$REOB	End-of-Batch Application Agent rules example
\$RLOG	Logging Application Agent rules example
\$RSCH	Scheduler Application Agent rules example
\$RWKT	Wake -up Terminate application agent rules example
ALLOCBTS	Allocate and catalog the Sterling Connect:Enterprise BTSNAP data set
ALLOCDMP	Allocate and catalog the Sterling Connect:Enterprise dump data set
ALLOCEMV	Allocate and catalog the Sterling Connect:Enterprise environment variables data set
ALLOCRTR	Allocate and catalog the Sterling Connect:Enterprise rules trace data set
ALLOCRU1	Allocate and catalog the Sterling Connect:Enterprise rules data set
ALLOCRU2	Allocate and catalog the Sterling Connect:Enterprise rules JCL data set
ALLOCSCP	Allocate and catalog the Sterling Connect:Enterprise script data set
ALLOCSNP	Allocate and catalog the Sterling Connect:Enterprise snapshot data set
ALLOCTRN	Allocate and catalog the Sterling Connect:Enterprise translate table data set
ASMLKXIT	Assemble and link user exits
ASMMODT	Assemble and link the mode table entry
ASMTC10	Assemble and link STTC10 after BTAM maintenance
ASMIMT	Sterling Connect:Enterprise assembly for user message table STOAPIMT
ASMUMT	Sterling Connect:Enterprise assembly for user message table STUTAUMT
ASMUSST	Assemble and link the USS table entry
CONV\$VCF	Convert from Post-release 2.1.00 Mailbox VCF file to Sterling Connect:Enterprise 1.0.00 VCF file
CONVERT	Convert pre-release Connect:Mailbox 2.1.00 batch queues into pre-release Sterling Connect:Enterprise 1.0.00 batch queues
CONVXLAT	Create a custom table used by Sterling Connect:Enterprise to translate data between ASCII and EBCDIC for FTP session processing
CSCADD	Add a data set to the Sterling Connect:Enterprise VSAM batch queues using the Cross System Client Utility
CSEXTE	Extract a data set from the Sterling Connect:Enterprise VSAM batch queues using the Cross System Client Utility

Example Member	Description
CSCLIST	List the batch queue directory entries using the Cross System Client Utility
CSCSTAT	Change Sterling Connect:Enterprise VSAM batch status flags using the Cross System Client Utility
DATAVAR	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to use the DATAMODE, DATASTRU, and DATATYPE variables to change the default settings for an ODF *REMOTES definition
DELAY	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that illustrates how to log on to an FTP server using Retry with a Delay
DUMMY	Dummy record with key of hex zeros, used to Initialize the VSAM files
ENTPRS	Execute (BSC/SNA/FTP) Sterling Connect:Enterprise online
ENTPRSI	Execute (ICO) Sterling Connect:Enterprise online
FALL\$VCF	Convert back to post-release 2.1.00 VCF file
FALLBACK	Convert back to pre-release 2.1.00 batch queues
FIREWALL	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that illustrates going through a proxy firewall
FTPACVAR	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to display all Sterling Connect:Enterprise REXX variables
FTPLOGON	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that illustrates how to use the IPADDR, PORTNO, USERID, PASSWORD, and NEWPASS variables specified in the ODF *REMOTES definition
GENOPT	Generate the Options Definition File
GETCPUID	Obtain CPUID
HOSTADDR	Sterling Connect:Enterprise sample script to return the IPADDR of a host name
HOSTNAME	Sterling Connect:Enterprise sample script to return the host name of an IPADDR
IDANDBID	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to use the ID and BID variables to select batches
IEFBR14	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that does nothing; used if AC_SCRIPT not written
JCREXBC1	Diagnostic aid run by customer to REPRO out selected batches and transmit them to IBM Support.
JCREXBC2	Diagnostic aid run by IBM Support to retrieve the batch(es) sent by JCREXBC1, and REPRO them to an in-house database.
LIST1	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to use the IDLIST variable specified in the ODF *CONNECT definition when the session has already been established

Example Member	Description
LIST2	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client illustrates how to use the BEGINLIST and IDLIST variables in the ODF *CONNECT definition when the session has already been established
LIST3	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to use the BEGINLIST, IDLIST, and ENDLIST variables in the ODF *CONNECT definition when the session has already been established
LIST4	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to use the IDLIST and ENDLIST variables in the ODF *CONNECT definition when the session has already been established
LOCDIR	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to use LOCDIR variables to send only batches whose Transmitted flag is off
MODETAB1	Logon mode table for use with Sterling Connect:Enterprise
NOBATCH	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that illustrates how to simulate NOBATCH=NC. If there are no batches in a particular mailbox, do not sign on the remote; otherwise, sign on using FTP logon Exec.
OPTBSC	Generate the Options Definition File (BSC)
OPTDEF	Generate the Options Definition File
OPTFTP	Generate the Options Definition File (FTP)
OPTSNA	Generate the Options Definition File (SNA)
PASSTABD	Sterling Connect:Enterprise sample password table for sample Exec PASSTABL
PASSTABL	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that illustrates how to use an external table to supply a password and new password to a log on sequence
PRTSNAP	Print Sterling Connect:Enterprise snapshot data set
RECVONLY	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to receive data from an FTP server
RECVSEND	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to receive from then send to an FTP server
REORG	Example job of how to reclaim space on your VSAM files caused by CA/CI splits
RETRY	Sterling Connect:Enterprise sample LOGON_SCRIPT for FTP auto client that illustrates how to log on to an FTP server using Retry with no Delay
SENDONLY	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to send data to an FTP server
SENDRECV	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to send to then receive from an FTP server
SRVPROC	Generate the process to start the VSAM server
SRVRESET	Reset the VSAM I/O server

Example Member	Description
STREXBCC	Create IDCAMS control cards to REPRO batches from customer database (used by customer); filter VCFSEQ, VPFSEQ and VBQSEQ records (used by customer); and update VCFSEQ, VPFSEQ, VBQSEQ, MSTRSEQ records (used by IBM Support)
STUTAPFR	Database utility - Rebuild VPF file from VCF file
STUTAVIX	Example JCL that can be used to run the VCF Alternate Index Key Verification Utility
SWITCH1	SYS1.VTAMLST(Switch1) define switched major node for PC-TRACS 3770 site
TZ	UNIX environment variables
UNIXFTP	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to send and receive data from a UNIX FTP server
UNIXRDX	Sterling Connect:Enterprise sample AC_SCRIPT for FTP auto client that illustrates how to send and receive data from a Connect:Enterprise UNIX FTP server
UNLOAD	IEBCOPY unload of Sterling Connect:Enterprise tape
USERASM	Run the Sterling Connect:Enterprise user assembly
USERASMX	Run the Sterling Connect:Enterprise user assembly optional: only needed if planning to use force command. The BSC \$\$STOP LINE=xxxxxxx,force command requires that each BSC have its own DD in the Sterling Connect:Enterprise JCL.
USSTAB1	MVS CBIPO USS table
VCF2048	Convert the VCF from a record size of 768 to 2048.
VCFRESIZ	Convert the VCF from a record size of 2048 to 768.
VERIFYRL	Application agent rules verification utility
VSAMAIX1	Example JCL that can be used to define and build an alternate index, and define the path name
VSAMBKUP	Run STUTABKS to prevent new STOUTL Move or Erase jobs from running (used for 24x7 Backup Facility)
VSAMDEF	Define VSAM files (VPF, VCF, VBQS, VLFS)
XADD	Add a data set to the Sterling Connect:Enterprise VSAM batch files
XDELETE	Flag batches as deleted from the Sterling Connect:Enterprise VSAM file
XERASE	Erase batches from the Sterling Connect:Enterprise VSAM batch files
XEXTRACT	Extract batch(es) from Sterling Connect:Enterprise VSAM batch files
XLIST	List Sterling Connect:Enterprise batches
XMOVE	Move a batch from one VSAM batch file to another
XPURGE	Purge batch(es) from Sterling Connect:Enterprise VSAM batch files (initialize the VSAM files)

Example Member	Description
XPURGEX1	Example JCL that can be used to identify an alternate index to Sterling Connect:Enterprise, populate VCF key fields, and provide complete implementation instructions
XPURGE64	Example JCL to convert pre-Version 1.4 VPF/VCF files and allow execution in the expanded Batch ID environment (BID64).
XREPORTS	Generate Sterling Connect:Enterprise reports: <ul style="list-style-type: none"> ◆ Auto Connect Detail Report - All ◆ Auto Connect Detail Report - FTP Only ◆ Auto Connect Queue Report ◆ Auto Connect Summary Report ◆ Offline Utility Log Report ◆ Remote Connect Detail Report ◆ Remote Connect Summary Report
XSTATFLG	Change Sterling Connect:Enterprise VSAM batch status flags
XVERIFY	VSAM database verification utility, which reports and/or repairs VSAM file problems

CICS Interface Files

The ENTPRS.EXAMPLE library contains the following example members specific to the CICS interface.

CICS Example Member	Description
CECICIN1	Define Sterling Connect:Enterprise CICS interface resources (CSD definitions) for new installations, including files, programs, mapsets, and transactions
CECICIN2	Define Sterling Connect:Enterprise CICS interface resources (CSD definitions), including connections and sessions
CECICRNM	Rename the CICS interface programs and mapsets
CECICUP0	Define Sterling Connect:Enterprise CICS interface resources (CSD definitions). Note: Use only for upgrading from Sterling Connect:Enterprise 1.0.00 to add new CSD definitions.
CECICUP1	Define Sterling Connect:Enterprise CICS interface resources (CSD definitions). Note: Use only for upgrading from Sterling Connect:Enterprise 1.1.00 to add new CSD definitions.

CICS Example Member	Description
CECICUP2	Define Sterling Connect:Enterprise CICS interface resources (CSD definitions). Note: Use only for upgrading from Sterling Connect:Enterprise 1.2.00 to add new CSD definitions.
CECICUPM	Define Sterling Connect:Enterprise CICS interface resources (CSD definitions) if you are upgrading from any version of Connect:Mailbox to Sterling Connect:Enterprise.
CECIUNLD	Unload the CICS interface release tape to system libraries.
CECIVDEF	Define the CICS interface VSAM administration file.
CECIVREP	Repro the CICS interface VSAM administration file data.

The ENTPRS.SOURCE library contains the following members related to the CICS interface:

Member	Description
APISAMP1	<p>The source code for the first of three sample API programs. It is an Assembler Language CICS Command Level program that is the target of the Wake Up request from Sterling Connect:Enterprise. When this transaction (CES1) is initiated, an IPS from Sterling Connect:Enterprise is received. A REQUEST IPS is immediately returned to Sterling Connect:Enterprise to receive the recently added batch.</p> <p>The batch data is written into a Temporary Storage Queue for a REQUEST. See the <i>IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide</i> for more information.</p> <p>Before you assemble and execute the sample APISAMP1 program, you must change several lines of code for your site-specific definitions. Locate every occurrence of the label H00SNAME and change it to specify your Sterling Connect:Enterprise system symbolic name. Check the CICS interface Panel 1.3 or 1.5 to determine the symbolic name if you are unsure of the assigned name. Additionally, each reference to H00SUSER and H00SPSWD is modified to specify the user ID and password required by your Sterling Connect:Enterprise system. If you do not have security active in the Sterling Connect:Enterprise system you are using, these fields do not require changes.</p>
APISAMP2	<p>The source code for the second of three sample API programs. It is an Assembler Language CICS Command Level program that is started by transaction CES1 at the completion of the first sample program. The batch data is retrieved from Temporary Storage and sent to Sterling Connect:Enterprise for an ADD.</p> <p>When the ADD is completed and acknowledged by Sterling Connect:Enterprise, an Initiate Auto Connect command is formatted and sent to Sterling Connect:Enterprise. The API program of your designation is notified when the Auto Connect completes. See the <i>IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide</i> for more information.</p> <p>Note: Before you assemble and execute the sample APISAMP2 program, change the code for the labels H00SNAME, H00SUSER, and H00SPSWD as explained for APISAMP1.</p>

Member	Description
APISAMP3	The source code for the last of three sample API programs. It is an Assembler Language CICS Command Level program specified (by transaction CES2) as the transaction notified at the completion of the Auto Connect started by the second sample program. When this transaction (CES3) is initiated, it may receive the IPS from Sterling Connect:Enterprise containing messages from the terminated Auto Connect. See the <i>IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide</i> for more information.
C\$Axx, C\$Hxx, C\$Oxx, C\$Rxx, C\$Uxx, C\$Wxx	These macros describe the request blocks that are sent to Sterling Connect:Enterprise by the CICS interface or the User API. For more information about the structure of the interface parameter and header data (C\$H00), refer to the <i>IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide</i> . For a list of IPS Trailers (C\$Axx, C\$Oxx, C\$Rxx, C\$Uxx, C\$Wxx) refer to the <i>IPS Trailers</i> appendix in the <i>IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide</i> .
C\$CTLCA	A macro that defines the control COMMAREA utilized by the User Application Programming Interface to identify IPS data that is exchanged by a Temporary Storage Queue. The control COMMAREA is passed to CE62002 using a CICS LINK command.
C\$VSAM	A macro that defines the CICS interface VSAM record images that are provided as part of the parameter block defined by the member EXITS.
EXITS	A DSECT that defines the parameter data that is provided to all user-written exits available within the CICS interface. Requires C\$VSAM, C\$U28, C\$O37 through C\$O64, C\$O74 and C\$O77 for redefinition of embedded record areas.
EXITSAMP	The source code of a sample exit program. It is an Assembler Language CICS Command Level program that demonstrates the techniques possible within user-written exits. All available exit types are included in this sample program.

The ENTPRS.OBJECT and ENTPRS.CICS.LOAD libraries contain the object and load modules for all of the CICS interface programs and mapsets.

ISPF Interface Files

The ENTPRS.EXAMPLE library contains the following example members the specific to the ISPF interface.

ISPF Example Member	Description
ALLODIAG	Example JCL to allocate Sterling Connect:Enterprise Snapout and Btsnap data sets in TSO logon process
ALLOISPF	Example JCL to allocate Sterling Connect:Enterprise ISPF libraries in TSO logon process

ISPF Example Member	Description
APPLDEF	Example VTAM application definition for Sterling Connect:Enterprise ISPF
ISPCNVRT	Example JCL to run the ISPF Model Convert Utility
ISPDEFDG	Example JCL to allocate and catalog the Sterling Connect:Enterprise ISPF Snapout and BTSNAP data sets
ISPUNLOD	IEBCOPY unload of Sterling Connect:Enterprise ISPF interface
ISPVSMDF	Define the ISPF interface VSAM administration file
ISPVSMRP	Repro the ISPF interface VSAM administration file data
ISR@PRIM	Sample ISPF primary menu with Sterling Connect:Enterprise option
LIBDEF	Sterling Connect:Enterprise ISPF interface startup CLIST (Invoked from ISPF environment)
MODEAPPC	LU6.2 mode table for Sterling Connect:Enterprise ISPF interface
MOVETYPE	Sample ISPF edit macro to move TYPE= after NAME= in remote definitions

The ENTPRS.SOURCE library contains the following members related to the ISPF interface:

Member	Description
C\$005	Macro that maps the IPS trailer used to communicate with Sterling Connect:Enterprise. Typically, this trailer is used for DUMP requests, but is used in the ISPF security exits only as means to obtain the request ID.
C\$H00	Macro that maps the IPS header, which identifies the user ID and encrypted password that is passed to the Sterling Connect:Enterprise system and the Sterling Connect:Enterprise system (and release level) the request is for. It also identifies the request type that is being sent to the Sterling Connect:Enterprise system.
MZMCPFIX	Initiation security exit used to restrict individual or groups of interface functions to certain users.
MZAPCFRX	Function request security exit to restrict communications to certain Sterling Connect:Enterprise systems and reject communications requests made to Sterling Connect:Enterprise systems.
Z\$CMID	Macro used by the ISPF interface programs which address fields in the Connect:Mailbox authorized user table. This table data is displayed on panel MZD60. Provides a DSECT for the list of authorized user IDs and related data fields.

The ENTPRS.OBJECT and ENTPRS.ISPF.ISPLLIB libraries contain the object and load modules for all of the ISPF interface programs.

Creating the VSAM File Server

After unloading the Sterling Connect:Enterprise release tape, you must perform the following tasks:

- ◆ Set up the VSAM file server
- ◆ Define and initialize the VSAM batch files

This chapter provides the procedures to complete these tasks.

In addition, you may want to create a VCF alternate index to improve the execution of the offline utilities. The offline utilities, which perform tasks such as adding and extracting batches from the VBQs, are discussed in the *IBM Sterling Connect:Enterprise for z/OS User's Guide* and comprise a major component in Sterling Connect:Enterprise. The VCF alternate index provides more information to the STOUTL program, which executes the offline utility programs, enabling it to select the most efficient path to access files and run in the most efficient manner possible. To implement this feature, see *Creating a VCF Alternate Index* on page 38.

Setting Up the VSAM File Server

The VSAM file server manages all VSAM files and performs all VSAM I/O operations. Each Sterling Connect:Enterprise system you define and run must use its own VSAM file server. Within each system, the VSAM file server executes as a subsystem.

Each VSAM file server is given a unique, user-defined, four-character name. All other address spaces, that is, the Sterling Connect:Enterprise online system and STOUTL offline utilities, use the VSAM file server name to communicate with it.

To set up the VSAM file server:

1. Edit the SRVPROC member of the ENTPRS.EXAMPLE library. Change SRVNAME to be the PROCLIB member name.

Note: You can assign any name. However, do not assign a PROCLIB member name identical to the NAME= parameter chosen as the file server name. This starts the Process in its own subsystem on subsequent starts, resulting in JCL errors.

2. Change the following JCL:

Parameter	Description
NAME= <u>SRV1</u>	The 4-character VSAM file server name in the PROC statement, also known as the subsystem name. You can later change the server name if desired, but if you do you must also change all offline utilities and online Sterling Connect:Enterprise nodes that reference the VSAM file server name. This parameter is required.
EPVT (Extended Private Storage Area)	Specifies the number of 4-KB storage blocks of extended private storage to allocate above the 16-MB line. The default value is 22000. Use the default storage value until you have an understanding of your repository configuration. After your repository is configured and running, you can adjust this value to reflect the storage used by your system. Use the Excel spreadsheet provided with the Sterling Connect:Enterprise for z/OS documentation set to determine the VSAM file server storage requirements when you are ready to adjust the storage value. For more information, see <i>Calculating the EPVT Storage Allocation Value</i> on page 32. This parameter is optional unless you need to modify any of the positional parameters that follow it (PVT, RETRY, STRNO, LSRBUF or QRBNO).
PVT	Specifies the number of 4-KB storage blocks of private storage to allocate below the 16-MB line. The default value is 8 (32 KB). Use the default storage value until you have an understanding of your repository configuration. After your repository is configured and running, you can adjust this value. For information on how to obtain this value, see the note on page 32. This parameter is optional unless you need to modify any of the positional parameters that follow it (RETRY, STRNO, LSRBUF or QRBNO).
QRBNO (Queue Request Block Number)	Specifies the number of Queue Request Blocks to pre-allocate for use by the PC Manager. The default is 500 and the maximum is 65535. Use the default QRBNO unless your VSAM Server gets the message, <i>BTB137E - All PcSrv QRBS in Use</i> . If the message persists even after increasing QRBNO, contact Sterling Support. This parameter is optional.
RETRY	Specifies the number of iterations the VSAM File Server task retries an I/O request before posting a failure status to the requestor. The default value is 120. A one second WAIT occurs between each attempt to complete the requested VSAM operation so the default could accumulate up to a two minute delay (120 x 1 seconds = 120 seconds) for the requesting task. This parameter is optional unless you need to modify any of the positional parameters that follow it (STRNO, LSRBUF or QRBNO). Caution: The value set here affects all users of the VSAM File Server so tasks, such as the Sterling Connect:Enterprise STMAIN task (Operator command processing and SNA/BSC remote processing), the CP task (APPC Interface Users), and the FTP Thread task (FTP Remote) may give the impression they are hung in a long wait when in fact they are really in their normal WAIT condition until the Server posts their I/O request as successful or failed.

Parameter	Description
STRNO (String Number)	Specifies the maximum number of concurrent VSAM requests allowed, for each file. Valid values are 1–255. The default value is 128. This parameter is optional unless you need to modify any of the positional parameters that follow it (LSRBUF or QRBNO).
LSRBUF (Local Shared Resource Buffers)	Specifies the maximum number of LSR buffers that VSAM allocates to service I/O requests for each file. Valid values are 3–65535. The default value is 256. This parameter is optional unless you need to modify QRBNO.
STEPLIB	Specifies the Sterling Connect:Enterprise load library. This data set must be an APF-authorized library defined during installation.

See *Calculating the EPVT Storage Allocation Value* on page 32 for the calculations used to determine the default EPVT storage allocation value and a worksheet to calculate the EPVT value for your site if you need to modify the default value.

3. Change YOUR.PROCLIB to a JES-defined PROCLIB and then run job SRVPROC which will use IEBGENER to copy your modified PROC to the specified PROCLIB.

Note: Do not include the name of the VSAM file server in the IEFSSNnn member of SYS1.PARMLIB. Although the VSAM file server executes as a subsystem, it dynamically adds itself to this table when it starts.

4. Issue the following console command to start the VSAM file server:

```
S procname, NAME=xxxx
```

where *procname* is the PROCLIB member name and *xxxx* is the file server name. If your VSAM file server is named SRV1, you can omit the NAME= parameter.

The console displays the following message when the VSAM file server is set up and running:

```
BTB002I : VSAM server initialization complete
```

Note: The VSAM file server must have update access to all applicable VSAM data sets. Ensure that appropriate system security rules have been implemented to permit this.

Calculating the EPVT Storage Allocation Value

In the Sterling Connect:Enterprise for z/OS documentation set, an estimation tool spreadsheet is provided to show the major calculations used to set the VSAM server extended private storage (EPVT) allocation default value of 22000 (the pink cell in the following table). When you open that Excel spreadsheet, you see the following table along with instructions on how to use the spreadsheet if you need to change the default EPVT storage value to meet your processing needs.

Factor	Bytes	Number	Total
BTVMSRV QRBNO= (default 500)	n/a	500	n/a
VBQ IDCAM Define Max RECSZ=	32570	n/a	n/a
VSAM Server Overhead	216704	1	216704
Number of VPFs defined via STOUTL Purge	1920	1	1920
Number of VCFs defined via STOUTL Purge	3840	1	3840
Number of VBQs defined via STOUTL Purge VBQALLOC=	34080	20	681600
Number of VLFs defined via STOUTL Purge VLFALLOC=	2592	8	20736
Estimated Number Concurrent FTP Threads	38272	1998	76467456
ODF *OPTIONS MAXCP	38272	99	3788928
ODF *OPTIONS MAXRP=	2688	99	266112
Estimated Number Concurrent Offline Jobs	71424	100	7142400
			88589696
		BTVMSRV EPVT =	21628 (22000)

To gather information on the factors used to calculate the EPVT which you can change based on your system, refer to the following table for more information. These cells are shaded gray in the table above.

Note: The CMB289I message issued by STMAIN when you issue the \$LIST RESOURCES command or when STMAIN is shut down shows the EPVT and PVT 4K-pages allocated and used. This message can be used to help set EPVT / PVT values for your environment as shown by the following example:

```
CMB289I - EPVT VSAM SERVER STORAGE POOL ALLOCATED/USED PAGES
220000/04080
CMB289I - PVT VSAM SERVER STORAGE POOL ALLOCATED/USED PAGES 00008/00002
```


Factor	Description and for More Information
BTVSMSRV QRBNO= (default 500)	Specifies the number of Queue Request Blocks to pre-allocate for use by the PC Manager. For more information, see the parameter table on page 30 which describes the JCL parameters in the SRVPROC member used to set up the VSAM file server.
VBQ IDCAM Define Max RECSZ=	Specifies the maximum record size allowed for VBQ files. For more information, see the parameter table on page 35 which describes the JCL parameters in the VSAMDEF member used to define VSAM batch files.
Number of VBQs defined via STOUTL Purge VBQALLOC=	Specifies the number of VBQ files that online Sterling Connect:Enterprise allocates when it is brought up for the first time. For more information, see the parameter table on page 37 which describes the JCL parameters in the XPURGE member used to initialize the VSAM batch files.
Number of VLFs defined via STOUTL Purge VLFALLOC=	Specifies the number of VLF files that online Sterling Connect:Enterprise allocates when it is brought up for the first time. For more information, see the parameter table on page 37 which describes the JCL parameters in the XPURGE member used to initialize the VSAM batch files.
Estimated Number Concurrent FTP Threads	Specifies the maximum number of FTP threads expected to be running at any one time, both auto connect and remote connects. To provide enough storage for all defined FTP threads, set the value to the sum of the ODF parameters, FTP_MAX_CLIENT_THREADS and FTP_MAX_SERVER_THREADS. For more information, see the descriptions for these ODF parameters in Chapter 5, <i>Configuring ODF Records for FTP Connections</i> , in the <i>IBM Sterling Connect:Enterprise for z/OS Administration Guide</i> .
ODF *OPTIONS MAXCP	Specifies the maximum number of command processor tasks (from 1–99) allowed to run concurrently as defined in the Options Definition File (ODF). For more information, see Chapter 3, <i>Configuring *OPTIONS Record for System Resources</i> , in the <i>IBM Sterling Connect:Enterprise for z/OS Administration Guide</i> .
ODF *OPTIONS MAXRP=	Specifies the maximum number of rules processor tasks (from 1–99) allowed to run concurrently for application agent processing as defined in the Options Definition File (ODF). For more information, see Chapter 3, <i>Configuring *OPTIONS Record for System Resources</i> , in the <i>IBM Sterling Connect:Enterprise for z/OS Administration Guide</i> .
Estimated Number Concurrent Offline Jobs	Specifies the maximum number of STOUTL and CSC/ICO batch jobs that you expect to run concurrently in your system.

Defining and Initializing the VSAM Batch Files

The VSAM batch files are key-sequenced VSAM data sets that store all data collected from remote sites and all data available for transmission to remote sites. This data is grouped into batches.

The VSAM batch files are accessed by both online Sterling Connect:Enterprise and the offline utilities. The VSAM batch files must be defined to VSAM and initialized before use by Sterling Connect:Enterprise. After the VSAM files are defined and initialized, you can allocate and deallocate them using the online `$$ALLOC` and `$$DALLOC` console commands. You must also include the batch files in your standard backup and restore procedures.

The following data sets make up the VSAM batch files:

File Name	Description
VPF	The VSAM Pointer File (VPF) is the main control file used by Sterling Connect:Enterprise to locate and control transmission and collection of data. The VPF automatically locates batches when you supply the batch identifiers for both online Sterling Connect:Enterprise and the offline utilities. For normal Sterling Connect:Enterprise operation, you do not need to know where a particular batch resides.
VCF	The VSAM Control File (VCF) reflects the status and characteristics of a batch.
VBQ01–VBQ20	The batch data records are written to and read from the VSAM Batch Queues (VBQs). At least one VBQ must be defined. The maximum number of VBQs is 20.
VLf1–VLf8	VSAM Log Files (VLF). At least 1 VLF must be defined. The maximum number of VLFs is 8.

For SNA batches, the maximum VSAM batch files record size is 32,570 characters. This includes 32,553 data characters and a 17-byte key. For BSC batches, the maximum VSAM batch files record size is 4113 characters. This includes 4096 data characters and a 17-byte key. The remote sites must never send more than 4096 characters per block of data (including BSC control characters). The 4096-character restriction is BSC-specific.

The following tasks define and initialize the VSAM batch files:

- ◆ Defining the VSAM batch files using the VSAMDEF JCL from the example library on the release tape
- ◆ Defining the VSAM batch files

You must create a VSAM cluster for each Sterling Connect:Enterprise VSAM file (VPF, VCF, VBQ 01–20, and VLF 1–8).

To define the VSAM batch files:

1. Edit the VSAMDEF member in ENTPRS.EXAMPLE.
2. Change the parameters listed in the following table:

Parameter	Description
Data Set Names	Replace all data set names in VSAMDEF with names of your choice.
Volumes	Provide the proper volume information for each VSAM file.
??	Allocate space as required for your use.
Records (first occurrence)	The records value for the VPF. This value must be the maximum batch number allowed for your Sterling Connect:Enterprise system multiplied by 10, plus 25.
Records (second occurrence)	The RECORDS value for the VCF. This value must be 2 greater than the maximum batch number for your Sterling Connect:Enterprise system.
RECSZ (VBQ files only)	The maximum record size allowed. Records larger than 4096 can only be transmitted to a site running Sterling Connect:Enterprise. Offline-added, APPC-added, or FTP-collected batches can contain records up to 32,570 bytes. The minimum size for the VBQ files must be large enough to accommodate the maximum transmission block plus 17 bytes for the key. The RECSZ should be identical for each VBQ to eliminate confusion later.
SHAREOPTIONS	Specify 2 for all VSAM files. This enables you to run offline utilities without bringing down online Sterling Connect:Enterprise.

3. Submit the JCL.
4. Verify that the REPRO step in the sample JCL is executed.
5. REPRO writes an 80-byte dummy record, containing hexadecimal zeros in the first 17 bytes, to the VSAM files. A sample dummy record is provided in ENTPRS.EXAMPLE in the DUMMY member.
6. After ensuring that the VSAM file server is active, run the PURGE offline utility to initialize all control records.

Initializing the VSAM Batch Files

After you define the VSAM batch files, you initialize them by running the PURGE offline utility. The PURGE utility can also initialize the VSAM batch files and log files (that is, VBQnn and VLFn) at times other than installation. The values in the preceding procedure apply only to the initialization performed at installation. See the *IBM Sterling Connect:Enterprise for z/OS User's Guide* for the values to use when running the PURGE utility at times other than installation.

Start the VSAM file server *before* you run the PURGE utility.

Before running PURGE for the first time, verify that:

- ◆ All files are deleted and defined with IDCAMS.
- ◆ All files have an initial record with a key of X'00's copied into them using the REPRO command.

Caution: Never run the PURGE utility with INIT=ALL while Sterling Connect:Enterprise is online.

When PURGE INIT=ALL is executed, the VCF is initialized with the same number of records as defined in the MAXBNO parameter. A high MAXBNO value makes a PURGE run longer. The exact run length is affected by the Sterling Connect:Enterprise performance groups assigned to the PURGE jobs and VSAM file server.

PURGE Utility Sample JCL

The following sample JCL, which you will modify in Step 2 of the following procedure, executes the PURGE utility:

```
//PURGE      JOB      .... AS REQUIRED BY YOUR SITE
//STOUTL     EXEC     PGM=STOUTL, PARM='SRV1', REGION=4000K
//STEPLIB    DD      DISP=SHR, DSN=ENTPRS.LOAD
//BTSNAP     DD      SYSOUT=*
//REPORTS    DD      SYSOUT=*
//REPORTS2   DD      SYSOUT=*
//SYSPRINT   DD      SYSOUT=*
//SYSTEM     DD      SYSOUT=*
//SYSIN      DD      DATA, DLM=ZZ

  purge
  init=all
  MAXBNO=50000
  MBXNAME=PRODSNA1
  VPF='entprs.vpf'
  VCF='entprs.vcf'
  VBQ01='entprs.vbq01'
  VBQ02='entprs.vbq02'
  VBQ03='entprs.vbq03'
  VBQ04='entprs.vbq04'
  VBQ05='entprs.vbq05'
  VBQ06='entprs.vbq06'
  VLF1='entprs.vlf1'
  vbqalloc=6
  vlfalloc=1
ZZ
```

To initialize VSAM batch files:

1. Edit the XPURGE member of the ENTPRS.EXAMPLE library.
2. Change the parameters listed in the following table:

Parameter	Description
ENTPRS.LOAD	Replace with your load library name.
PARM='xxxx'	Replace xxxx with the 4-character name of your VSAM file server.

Parameter	Description
MAXBNO	Set to the maximum number of batch numbers you want the Sterling Connect:Enterprise system to contain. This value must be 2 less than the RECORDS value of the VSAM Control File (VCF). The acceptable value range is 1 to 9,999,999. The default is 9,999. Note: A VCF control record is written for each batch number in the Sterling Connect:Enterprise system. Allocate enough records in the VPF and VCF data sets to account for this. (The size of each VCF record is 768 bytes while the size of each VPF record is 136 bytes.)
INIT	Set to ALL to initialize all VSAM files.
MBXNAME	Set to an 8-character name. (Defaults to MAILBOX) This name is used by the Security interface when making security checks. It is also used by the application agents when dynamically defining consoles to issue console commands.
VBQALLOC	Set to the number of VBQ files that online Sterling Connect:Enterprise allocates when it is brought up for the first time. The maximum number allowed is 20. The number specified cannot exceed the number of defined VBQs. The default is 1.
VLFALLOC	Set to the number of VLFs that online Sterling Connect:Enterprise allocates when it is brought up for the first time. The maximum number allowed is 8. The number specified cannot exceed the number of defined VLFs. The default is 1.
VPF	Set to the full data set name of the VPF. You cannot change the names of any VSAM files after the PURGE utility has run.
VCF	Set to the full data set name of the VCF.
VBQ01–VBQ20	Set to the full data set name of the VBQ file from VBQ01 to VBQ20.
VLF1–VLF8	Set to the name of the VLF file from VLF1 to VLF8.

Note: VCF, VLF_n, VBQ01 and VPF are required when INIT=ALL is specified. Specify any additional VBQ_{nn} and VLF_n parameters in numerical order.

3. Submit the JCL.

When the PURGE job executes, it creates file control records in the VPF, initializes the VCF, and creates batch control records in the VCF. The following table lists the VSAM batch file characteristics after the PURGE utility runs:

File	Characteristics
VPF	Contains an initial record with a key of all hexadecimal zeroes and 24 file control records, one for every possible VSAM file that could be defined to Sterling Connect:Enterprise.

File	Characteristics
VCF	Contains an initial record with a key of all hexadecimal zeroes, a master control record, and the MAXBNO value of previously allocated slots for batch control records.
VBQ	Contains an initial record with a key of all hexadecimal zeroes and a record with the file ID and data set name.
VLF	Contains an initial record with a key of all hexadecimal zeroes, a record with the file ID, and data set name.

The PURGE utility also creates a REPORTS output file detailing the PURGE operation. A message is printed for each file initialized.

Using a SYSIN File for PURGE Parameters

You can create a SYSIN file to specify the PURGE program with the parameters for the PURGE utility. See the *IBM Sterling Connect:Enterprise for z/OS User's Guide* for information about PURGE.

Creating a VCF Alternate Index

To improve the execution of the offline utilities, you can create a VCF alternate index after you have initialized and defined the VSAM batch files. The offline utilities, which perform tasks such as adding and extracting batches from the VBQs, are discussed in the *IBM Sterling Connect:Enterprise for z/OS User's Guide* and comprise a major component in Sterling Connect:Enterprise. The example members, XPURGEX1 and VSAMAIX1, contain sample scripts and detailed instructions on how to implement the VCF alternate index. Follow the instructions provided in those example members customizing the JCL for your system.

Allocating Additional Data Sets and Implementing User Exits

This chapter describes the following optional installation procedures:

- ◆ Allocating additional data sets
- ◆ Implementing user exits

Allocating Additional Data Sets

In addition to the ODF and the VSAM batch files, the following optional data sets can be allocated during configuration or at a later time:

- ◆ Sterling Connect:Enterprise snapshot data set
- ◆ Sterling Connect:Enterprise environment variables data set
- ◆ Sterling Connect:Enterprise dump data set
- ◆ Sterling Connect:Enterprise BTSNAP dump data set
- ◆ Sterling Connect:Enterprise JES2 internal reader
- ◆ Sterling Connect:Enterprise Rules data set
- ◆ Sterling Connect:Enterprise Rules JCL data set
- ◆ Sterling Connect:Enterprise Rules Trace data set
- ◆ Sterling Connect:Enterprise Translate Table data set

These files are used by the Sterling Connect:Enterprise started task. The JCL for the Sterling Connect:Enterprise started task is member name ENTPRS, located in the ENTPRS.EXAMPLE library.

Allocating the Snapshot Data Set

Snapshot dumps are written to this data set if specified by the Sterling Connect:Enterprise execution JCL.

Use the following procedure to allocate and catalog a snapshot data set:

1. Edit the ALLOCSNP member in the ENTPRS.EXAMPLE library.
2. Change the following parameters:

Parameter	Description
ENTPRS.SNAPOUT	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set.
DCB information	Do <i>not</i> change the DCB information.

3. Submit the JCL.

Allocating the Sterling Connect:Enterprise Environment Variables Data Set

This data set contains environment variables used by the UNIX or Language Environment. Using the following example, specify variables such as time zone offset and LOCALE support for the SSL environment:

```
//ENVIRON DD DISP=SHR,DSN=USERID.DATASET.NAME(TZ)
```

Sample contents of the member from the example:

```
TZ=CST6CDT
LC_ALL=EN_US.IBM-O37
```

For more information about available LOCALES and environment variables, refer to the IBM documentation z/OS C/C++ Programming Guide, manual number SC09-2362-04 (CBCPG010).

Allocating the Dump Data Set

Dumps are written to a dump data set if specified by the Sterling Connect:Enterprise JCL. Because the Sterling Connect:Enterprise JCL can also direct dumps to SYSOUT, allocating this data set is optional.

Use the following procedure to allocate and catalog a standard system dump data set for job ABENDS:

1. Edit the ALLOCDMP member in the ENTPRS.EXAMPLE library:
2. Change the following parameters:

Parameter	Description
ENTPRS.DUMP	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set

Parameter	Description
DCB information	Do <i>not</i> change the DCB information.

3. Submit the JCL.

Allocating the BTSNAP Data Set

BTSNAP ESTAE dumps are written to a different data set.

Use the following procedure to allocate and catalog a BTSNAP ESTAE data set:

1. Access the ALLOCBTS member in the ENTPRS.EXAMPLE library.
2. Change the following parameters:

Parameter	Description
ENTPRS.BTSNAP	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set.
DCB information	Do <i>not</i> change the DCB information.

3. Submit the JCL.

JES2 Internal Reader

The Sterling Connect:Enterprise INTRDR file is used by user exits when batch jobs are submitted. The following DD card is included in the online Sterling Connect:Enterprise JCL:

```
//INTRDR DD SYSOUT=(*,INTRDR)
```

The Sterling Connect:Enterprise JESRDR file is used by Sterling Connect:Enterprise to submit JCL from application agents or the CICS/ISPF interfaces. The following DD card is included in the online Sterling Connect:Enterprise JCL:

```
//JESRDR DD SYSOUT=(*,INTRDR)
```

Allocating the Sterling Connect:Enterprise Rules Data Set

The Sterling Connect:Enterprise Rules data set file is used by application agents during STARTUP and REFRESH. It contains the rules control statements used by each application agent.

Use the following procedure to allocate and catalog a Sterling Connect:Enterprise Rules data set:

1. Edit the ALLOCRU1 member in the ENTPRS.EXAMPLE library:
2. Change the following parameters:

Parameter	Description
ENTPRS.RULES	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set.
DCB information	Do not change the DCB information.

3. Submit the JCL.

Allocating the Sterling Connect:Enterprise Rules JCL Data Set

An application agent uses the Sterling Connect:Enterprise Rules JCL data set file for submitting jobs. The data set contains the job streams referenced in the application agent rules.

Use the following procedure to allocate and catalog a Sterling Connect:Enterprise Rules JCL data set.

1. Edit the ALLOCRU2 member in the ENTPRS.EXAMPLE library:
2. Change the following parameters:

Parameter	Description
ENTPRS.RULES.CNTL	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set.
DCB information	Do not change the DCB information.

3. Submit the JCL.

Allocating the Sterling Connect:Enterprise Rules Trace Data Set

This procedure allocates and catalogs a Sterling Connect:Enterprise Rules Trace data set for application agent tracing.

Use the following procedure to allocate and catalog a Sterling Connect:Enterprise Rules JCL data set:

1. Edit the ALLOCRTR member in the ENTPRS.EXAMPLE library:
2. Change the following parameters:

Parameter	Description
ENTPRS.RULES.TRACE	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set.
DCB information	Do not change the DCB information.

3. Submit the JCL.

Allocating the Sterling Connect:Enterprise Translate Table Data Set

This procedure allocates and catalogs a Sterling Connect:Enterprise Translate Table data set for FTP data translation.

Use the following procedure to allocate and catalog a Sterling Connect:Enterprise Rules JCL data set:

1. Edit the ALLOCTRN member in the ENTPRS.EXAMPLE library:
2. Change the following parameters:

Parameter	Description
ENTPRS.TRANSLAT.TABLES	Replace the data set name with the name of your choice.
XXXX	Replace with the DASD unit number of the data set.
NNNNNN	Replace with the volume serial number of the data set.
DCB information	Do not change the DCB information.

3. Submit the JCL.

Implementing User Exits

Optional user exits are available for you to customize Sterling Connect:Enterprise. User exits are called at appropriate times during Sterling Connect:Enterprise processing and can set an action code before returning to alter the standard Sterling Connect:Enterprise processing. Sterling Connect:Enterprise provides only the links to the user exits. You must define, code, assemble, link, and test your own exits.

Note: User exit programs are optional. The system default is no exits.

Sterling Connect:Enterprise calls user exits with standard CALL linkage. As a result, Sterling Connect:Enterprise is not in control when the exits are in control. If your exits ABEND or go into a loop, the entire Sterling Connect:Enterprise system is affected, so define and test your programs carefully.

To aid in testing and debugging the user exits, invoke an Exit TRACE feature to snap the information passed to and from the exits before and after each CALL.

For more information on providing optional user exits, refer to the *IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide*.

Creating the User Assembly (BSC)

This chapter applies only to sites that use BSC data transmissions. BSC transmissions require that you create a user assembly to identify characteristics of the host site. This chapter describes the following tasks to create a user assembly:

- ◆ Analyzing your BTAM network and identifying which TP lines Sterling Connect:Enterprise uses
- ◆ Defining your BTAM network to Sterling Connect:Enterprise using macros supplied with Sterling Connect:Enterprise
- ◆ Assembling and linking the macros

Analyzing Your BTAM Network

Analyze your data transmission requirements to ensure that the necessary telecommunications lines are installed. Sterling Connect:Enterprise can use any point-to-point BSC-switched or BSC-leased telecommunications lines defined to the BTAM network of your system.

When Sterling Connect:Enterprise is running, it has exclusive use of the telecommunications lines defined for its use. However, Sterling Connect:Enterprise does not have the exclusive use of the remote sites or terminals.

Defining Your BTAM Network to Sterling Connect:Enterprise

Two macros supplied with Sterling Connect:Enterprise enable you to create the user assembly:

- ◆ M\$LINEX
- ◆ M\$ENDX

These macros are assembled to create the user assembly module that is dynamically loaded during online Sterling Connect:Enterprise execution. The following sections describe these macros in more detail.

Note: If you are currently running a BSC configuration using the M\$LINE and M\$END macros, your user assembly will still work. However you should convert to the M\$LINEX and M\$ENDX macros, which provide for more control over stopping and starting individual BSC lines using the \$\$\$STOP and \$\$\$START console commands.

The M\$LINEX Macro

A M\$LINEX macro must be coded for each BTAM line used by Sterling Connect:Enterprise. The M\$LINEX macro uses the following options.

Macro	Options
M\$LINEX	BCHSEP= <u>NO</u> OPT1 OPT2 OPT3
	BUFSIZ=nnn
	CLOSE=nnn
	DIALOUT= <u>MANUAL</u> AUTO
	ENDCON= <u>OPTION1</u> OPTION2
	ID=xxxxxxx
	IDVER= <u>NO</u> HOST REMOTE BOTH
	MODEM=SDRV SDUD
	RECSEP= <u>1E</u> 1F
	TYPE=BSCSW BSCNS

The following table describes the M\$LINEX options.

Options	Description
BCHSEP= <u>NO</u> OPT1 OPT2 OPT3	<p>Specifies which method Sterling Connect:Enterprise uses to separate batches sent to remote sites on the line when multiple batches are sent in a single connection.</p> <ul style="list-style-type: none"> ◆ NO—Batches are not separated. If multiple batches are sent in a single connection, they are concatenated and sent as a single batch. If you use this option, remote sites using the line must be able to process concatenated data batches. ◆ OPT1—A common RJE method of separating batches is used. At the end of each batch, Sterling Connect:Enterprise sends an EOT (X'37') to the remote, reads a response from the remote, and then sends ENQ (X'2D') to request use of the line. Do not use this option if the remote site using this line cannot properly respond to this protocol. ◆ OPT2—Sterling Connect:Enterprise separates batches using an ETX (X'03'). Do not use this option unless the remote can properly respond to this protocol. ◆ OPT3—Batches are not separated. If multiple batches are sent in a single connection, they are concatenated and sent as a single batch. However, the individual batches are not flagged as transmitted until the entire transmission is successfully completed. If you use this option, remote sites using this line must be able to process concatenated data batches. <p>The default is NO.</p> <p>This parameter is not required for JES communications. If you send multiple batches to JES, concatenate them and send them as a single transmission, regardless of the BCHSEP option chosen for the line.</p>
BUFSIZ=nnnn	<p>Specifies the size of the transmission buffer for the line. Any value between 512 and 4096 is valid. The default is 512.</p>
CLOSE=nnn	<p>Specifies the number of consecutive hard I/O errors that cause Sterling Connect:Enterprise to close the line and make it unavailable for use.</p> <p>Any number of errors between 0 and 255 is valid. Do not use a value of 1. A value of 0 forces Sterling Connect:Enterprise to never close the line. The only exception is that the line closes if BTAM rejects an I/O because of a serious error, such as an incorrect definition of the line. In this case, console message CMB083 indicates the BTAM return code.</p> <p>If this value is 0 or greater than 16, Sterling Connect:Enterprise issues a warning message on the system console when 16 consecutive hard I/O errors occur.</p> <p>The default is 3.</p>

Options	Description
DIALOUT= <u>MANUAL</u> AUTO	<p>Specifies the host dial-out characteristics of the line. This operand is only required if you want to dial a remote site from the host site, and is only valid for switched lines. To use this feature, the remote site must be able to answer a call from the host.</p> <ul style="list-style-type: none"> ♦ MANUAL—The DIALOUT connection from the host is established by manually dialing the remote site. ♦ AUTO—The DIALOUT connection from the host is established by the AUTO DIAL feature installed for the line. Using DIALOUT=AUTO requires a host's Transmission Control Unit equipped with the AUTO DIAL feature and an appropriate modem. <p>The default is MANUAL.</p>
ENDCON= <u>OPTION1</u> OPTION2	<p>Specifies the method used by Sterling Connect:Enterprise to end a switched line connection after a batch data transmission completes.</p> <ul style="list-style-type: none"> ♦ OPTION1—Sends a Disconnect (DLE/EOT) at the end of the connection. ♦ OPTION2—Sends an EOT, followed by a DLE/EOT at the end of the connection. <p>The default is OPTION1.</p>
ID=xxxxxxx	<p>Specifies the 1–8 character name used by Sterling Connect:Enterprise to identify each telecommunications line.</p> <p>This line ID identifies telecommunications lines in console messages when Sterling Connect:Enterprise is online. It is the Mailbox ID for those remote terminals that do not transmit their Mailbox ID as part of the data collection Process. The line ID must match the DD name in the Sterling Connect:Enterprise startup JCL identifying the UNIT address. For example, if ID=LINE01 is specified, the Sterling Connect:Enterprise JCL must contain the following statement:</p> <pre>//LINE01 DD UNIT=xxx</pre> <p>(where xxx is the unit address)</p> <p>This is a required parameter.</p>
IDVER= <u>NO</u> HOST REMOTE BOTH	<p>Specifies the use of BTAM ID verification for added security on switched lines only. Verification enables exchange and verification of remote site IDs before a switched line connection is allowed.</p> <p>To use this feature, your remote sites must be capable of exchanging IDs as required by BTAM.</p> <p>NO—BTAM ID verification is not used on this line.</p> <p>HOST—Causes the host site (Sterling Connect:Enterprise) to send its ID to the remote site for verification.</p> <p>REMOTE—Requests remote sites to send their IDs to the host site for verification.</p> <p>BOTH—Causes both the host and the remote sites to send their IDs for verification.</p> <p>The default is NO.</p>

Options	Description
MODEM=SDRV SDUD	<p>The type of synchronous auto-dial language modem that is used on this switched line. This line is only available for dialing the remote site. Remote sites cannot dial in unless the SADL modem is reconfigured (vendor specification). This is only valid for SADL modems.</p> <p>This option requires that the LINES= parameter be specified in the *CONNECT section for Auto Connect sessions.</p> <ul style="list-style-type: none"> SDRV—Specifies a Racal-Vadic SADL or UDS 2860 modem and protocol. If you use an UDS 2860 modem, you must specify MODEM=SDRV. This modem does not follow the standard UDS SADL modem protocol. SDUD—Specifies a UDS SADL modem and protocol. <p>A SADL modem enables Sterling Connect:Enterprise to dial a remote site without using a standard 801 Auto Call Unit, meaning that a line on the front end processor is freed. Sterling Connect:Enterprise supports the Racal-Vadic Synchronous Auto Dial language 4850PA, UDS 208B/D, and UDS 2860.</p>
RECSEP= <u>1E</u> 1F	<p>Specifies the BSC record separator that designates blocked output during the Auto Connect session. The default is 1E.</p> <ul style="list-style-type: none"> 1E—Specifies the standard record separator for 3780-type devices. 1F—Specified for 2780-type devices or other remote sites that require its use.
TYPE=BSCSW BSCNS	<p>Specifies the TP line type. This is a required parameter.</p> <ul style="list-style-type: none"> BSCSW—Used for switched (dial-up) lines. BSCNS—Used for point-to-point (leased) lines.

M\$LINEX Examples

The following M\$LINEX macros examples show two different TP line configurations:

- ◆ The following example defines a line named LINE023 for a BSC switched line with the auto dial feature:

```
M$LINEX ID=LINE023,TYPE=BSCSW,DIALOUT=AUTO
```

The corresponding Sterling Connect:Enterprise JCL DD statement is:

```
//LINE023 DD UNIT=xxx
```

- ◆ The following example defines a line named HOUSTON for a BSC leased line with remote terminals that use 1F as the IRS. This line can handle transmissions of data blocks with a maximum of 3,000 characters.

```
M$LINEX ID=HOUSTON,TYPE=BSCNS,RECSEP=1F,BUFSIZ=3000
```

The corresponding Sterling Connect:Enterprise JCL DD statement is:

```
//HOUSTON DD UNIT=xxx
```

Document M\$LINEX Macros

The following worksheet is provided for documenting M\$LINEX macros. Documenting M\$LINEX macros now provides help when troubleshooting later.

Make copies of the worksheet if you want to list the lines for different network configurations separately. Use the Comments field to briefly describe the entry, such as the destination of the line and the unit address assigned to the line in your execution JCL.

M\$LINEX Macros Worksheet

Macro	Code
LOAD MODULE	Name for this line configuration: UA= _____
LINE ID	_____
TYPE	_____
RECSEP	_____
DIALOUT	_____
BCHSEP	_____
BUFSIZ	_____
CLOSE	_____
ENDCON	_____
MODEM	_____
IDVER	_____
Comments:	_____

The M\$ENDX Macro

The M\$ENDX macro must be the last macro in the user assembly. The M\$ENDX macro is coded once and has no operands, as shown in the following:

```
M$ENDX
```

Assembling the M\$LINEX Macro Operands

The M\$LINEX macro operands you identify for each TP line and the M\$ENDX macro are assembled to create the user assembly module. This module is dynamically loaded during online Sterling Connect:Enterprise execution.

Use the following procedure to assemble the M\$LINEX macro operands:

1. Access the USERASM member in the ENTPRS.EXAMPLE library.
2. Change the following parameters:

Parameter	Description
ENTPRS.SOURCE	Replace with your source library name.
M\$LINEX macro parameters	Replace with the operands you identified earlier.
ENTPRS.LOAD	Replace with the name of your Sterling Connect:Enterprise load library.
ANYNAME	Replace with the name of your choice. Note the name on the M\$LINEX Macros Worksheet for future use.
Comments	Replace with any text that describes each line as documented on the worksheet.

3. Submit the JCL.

Example of Assembled LINE Macro Operand

The following example shows the assembler input for a network with three BSC switched lines (LINE01, LINE02, LINE03) into Sterling Connect:Enterprise. LINE03 is equipped with the auto dial feature. BRANCH01 and BRANCH02 are two BSC leased lines running to branch office one and branch office two, and allows a 2,000-character maximum transmission buffer.

```
M$LINEX ID=LINE01,TYPE=BSCSW
M$LINEX ID=LINE02,TYPE=BSCSW
M$LINEX ID=LINE03,TYPE=BSCSW,DIALOUT=AUTO
M$LINEX ID=BRANCH01,TYPE=BSCNS,BUFSIZ=2000
M$LINEX ID=BRANCH02,TYPE=BSCNS,BUFSIZ=2000
M$ENDX
END
```

The following shows the corresponding Sterling Connect:Enterprise JCL DD statements for the example BSC switched lines:

```
//LINE01 DD UNIT=xxx
//LINE02 DD UNIT=xxx
//LINE03 DD UNIT=xxx
//BRANCH01 DD UNIT=xxx
//BRANCH02 DD UNIT=xxx
```

You can create more than one user assembly to operate Sterling Connect:Enterprise in different configurations at different times. For example, you can build using only one TP line, or you may require a different configuration of lines assigned to Sterling Connect:Enterprise during the day and night. Each user assembly must have a unique load module name. The load module name of the proper user assembly is later supplied to the online Sterling Connect:Enterprise, and loaded during Sterling Connect:Enterprise initialization.

Installing the ISPF Interface

The ISPF interface is a standard ISPF application that you can install and manage within your z/OS environment. Installing the ISPF interface requires no specialized knowledge of Sterling Connect:Enterprise.

Before you begin the installation, review the *IBM Sterling Connect:Enterprise for z/OS Release Notes* to ensure that your system meets all software, hardware, and space requirements.

Unloading the Distribution Tape

The Sterling Connect:Enterprise distribution tape, which uses standard labels, contains the Sterling Connect:Enterprise ISPF interface files listed in the following table.

DSN	Label #	RECFM	LRECL	BLKSIZE	Dir Blocks	Format
CEISPF.ISPLLIB (Load library)	7	U	0	6144	200	IEBCOPY
CEISPF.ISPPLIB (Panel library)	8	FB	80	6320	510	IEBCOPY
CEISPF.ISPSLIB (Skeleton library)	9	FB	80	6320	20	IEBCOPY
CEISPF.ISPMLIB (Message library)	10	FB	80	6320	30	IEBCOPY
CEISPF.ISPTLIB (Table library)	11	FB	80	6320	5	IEBCOPY
CEISPF.VSAM (Administration file data records)	13	VSAM	2900-8192	N/A	N/A	IDCAMS

The ISPUNLOD example member in the ENTPRS.EXAMPLE library generates the ISPF output files listed in the following table. The Sterling Connect:Enterprise documentation refers to the files using the names listed in the table; however, you can assign different names and specify them in the ISPUNLOD example member.

DSN	Content	3390 Tracks
ENTPRS. ISPF.ISPLLIB	Main control program, LU6.2 subtask program, and all options program	200
ENTPRS. ISPF.ISPPLIB	Dialog and Help screens	370
ENTPRS. ISPF.ISPSLIB	JCL skeletons	15
ENTPRS. ISPF.ISPMLIB	Dialog messages	10
ENTPRS. ISPF.ISPTLIB	Input command table	2
ENTPRS. ISPF.VSAM	Administrative file data records	110

To unload the ISPF interface files from the distribution tape:

1. Modify the example member ISPUNLOD in the ENTPRS.EXAMPLE library for your system.
2. Supply a valid job card.
3. Replace XXXX in the JCL with the valid unit number where you intend to unload the installation data sets.
4. Submit the JCL.

For a complete list of the members of the ENTPRS.EXAMPLE library that are related to the ISPF interface and their function, see *ISPF Interface Files* on page 26.

Defining and Initializing the VSAM Administration File

This section contains information for updating an existing VSAM administration file and creating a new VSAM administration file. If this is a new installation, refer to *Updating the TSO Logon Procedure* on page 55.

Creating the VSAM Administration File

If this is a new installation or you want to replace your existing VSAM administration file, you must allocate and load a new VSAM administration file.

To create a new VSAM administration file:

1. Modify the ISPVSMDF member in the ENTPRS.EXAMPLE library to replace all data set names with names of your choice.

2. Supply a valid job card.
3. Replace ? in the selected JCL with an appropriate value for your system.
4. If you intend to add many model records, increase the RECORDS value in the selected JCL.
5. Define the remaining VSAM initialization parameters to meet the VSAM standards and requirements at your company.

Note: Do not change the definitions for the file attributes (SHAREOPTIONS, CISZ, KEYS, and RECSZ) in the installation JCL. If you modify any of these parameters, your system may malfunction.

6. Submit ISPVSMDF to allocate the VSAM administration file.
7. Continue with the steps in *Updating the VSAM Administration File* on page 55 to load it.

Updating the VSAM Administration File

If you have installed a version of the Sterling Connect:Enterprise ISPF interface, you can update and use your existing VSAM administration file. Using your existing VSAM administration file means that you do not have to redefine the connection definitions, VTAM APPL prefixes, or model records. Only the message library text records in the VSAM administration file are updated. This also eliminates the need to customize the ISPF interface.

To update the VSAM administration file:

1. Modify the ISPVSMRP member in the ENTPRS.EXAMPLE library to replace the ISPADMFL DD data set with a data set name of your choice.
2. Supply a valid job card.
3. Submit the JCL.

Updating the TSO Logon Procedure

To update the TSO logon procedure, perform the following tasks:

- ◆ Allocate the ISPF interface libraries
- ◆ Allocate the diagnostic libraries

Allocating the ISPF Interface Libraries

To allocate the ISPF interface libraries, add or concatenate the following DD statements to the TSO LOGON procedure:

```
//ISPLLIB DD DSN=ENTPRS.ISPF.ISPLLIB,DISP=SHR
//ISPSLIB DD DSN=ENTPRS.ISPF.ISPSLIB,DISP=SHR
//ISPPLIB DD DSN=ENTPRS.ISPF.ISPPLIB,DISP=SHR
//ISPMLIB DD DSN=ENTPRS.ISPF.ISPMLIB,DISP=SHR
//ISPTLIB DD DSN=ENTPRS.ISPF.ISPTLIB,DISP=SHR
//ADMINFIL DD DSN=ENTPRS.ISPF.VSAM,DISP=SHR
```

Allocating the Diagnostic Libraries

The ISPF interface includes a trace facility that provides diagnostic capabilities. To allocate the diagnostic libraries, perform the following steps:

1. Allocate two sequential data sets to your ISPF session.
2. Use the following JCL, in ENTPRS.EXAMPLE (ISPDEFDG), to allocate the TRACE files:

```
//ALLOCSNP EXEC PGM=IEFBR14
//SNAPOUT DD DSN=ENTPRS.ISPF.SNAPOUT,DISP=(NEW,CATLG),
//          UNIT=SYSDA
//          SPACE=(TRK,(30,15)),
//          DCB=(RECFM=VBA,LRECL=125,BLKSIZE=1632,DSORG=PS)
//BTSNAP DD DSN=ENTPRS.ISPF.BTSNAP,DISP=(NEW,CATLG),
//          UNIT=SYSDA
//          SPACE=(TRK,(30,15)),
//          DCB=(RECFM=VBA,LRECL=125,BLKSIZE=1632,DSORG=PS)
//*
```

3. Include the following DD statements in your TSO LOGON procedure:

```
//SNAPOUT DD DSN=ENTPRS.ISPF.SNAPOUT,DISP=SHR
//BTSNAP DD DSN=ENTPRS.ISPF.BTSNAP,DISP=SHR
```

4. To activate the tracing, use administration function ISPF interface system traces, option 10.6 on the IBM Sterling Connect:Enterprise Interface Primary Menu.

Creating the ISPF Interface Call

You can create the call to execute the ISPF interface using the following methods:

- ◆ Adding the ISPF interface to the ISPF primary menu
- ◆ Writing REXX (or CLIST) to call the ISPF interface using LIBDEFs

Adding the ISPF Interface to the ISPF Primary Menu

To add the ISPF interface to the ISPF Primary Menu:

Note: Member ISR@PRIM in the example library contains a sample ISPF primary menu.

1. Add the following card to the)BODY Section of your ISPF primary selection menu:

```
M +Mailbox - Sterling Connect:Enterprise Data Communications System.
```


2. Add the following card to the)PROC Section of your ISPF primary selection menu (if you are not planning on using LIBDEFs):

```
M, 'PGM(MZMCP001) NEWAPPL(MZI)'
```

Writing REXX (or CLIST) to Call the ISPF Interface Using LIBDEFs

You can use LIBDEFs to allocate the ISPF interface. The following example shows a sample REXX that uses LIBDEFs to allocate the ISPF interface files and then executes the interface:

```
/* REXX */
/* SAMPLE Sterling Connect:Enterprise LIBDEF ALLOCATION */
address tso
X=MSG('OFF')
"ALLOC DDNAME(ADMINFIL) DSNAME('YOUR.ENTPRS.ADMINFIL') "
"ALLOC DDNAME(BTSNAP) DSNAME('YOUR.ENTPRS.BTSNAP') "
"ALLOC DDNAME(SNAPOUT) DSNAME('YOUR.ENTPRS.SNAPOUT') "
address ispeexec
"LIBDEF ISPLLIB DATASET ID('YOUR.ENTPRS.ISPLLIB') "
"LIBDEF ISPLMLIB DATASET ID('YOUR.ENTPRS.ISPLMLIB') "
"LIBDEF ISPLPLIB DATASET ID('YOUR.ENTPRS.ISPLPLIB') "
"LIBDEF ISPLTLIB DATASET ID('YOUR.ENTPRS.ISPLTLIB') "
"LIBDEF ISPLSLIB DATASET ID('YOUR.ENTPRS.ISPLSLIB') "
SELECT CMD(MZMCP001) NEWAPPL(MZI) PASSLIB"
"LIBDEF ISPLLIB"
"LIBDEF ISPLMLIB"
"LIBDEF ISPLPLIB"
"LIBDEF ISPLTLIB"
"LIBDEF ISPLSLIB"
address tso
"FREE DDNAME(ADMINFIL) "
"FREE DDNAME(BTSNAP) "
"FREE DDNAME(SNAPOUT) "
/* END SAMPLE LIBDEF REXX */
```

Activating the ISPF Interface

Complete the following tasks to activate the Sterling Connect:Enterprise ISPF interface:

- ◆ Define ISPF interface VTAM APPLs
- ◆ Copy previous release model records
- ◆ Establish security for the VSAM administration file
- ◆ Specify function-level security

Defining ISPF Interface VTAM APPLs

Create one or more VTAM APPL definitions to allow the ISPF interface to logon to Sterling Connect:Enterprise using the LU6.2 protocol. The names (ACBNAMEs) for each VTAM APPL definition are composed of:

- ◆ A prefix that contains:
 - ◆ At least one character
 - ◆ A maximum of six characters
 - ◆ A name of your choice for each group

Note: You can define several groups of VTAM APPLs, but you must use the same prefix for every individual VTAM APPL within that group.

- ◆ A numeric suffix starting with 00 that is increased sequentially by one (00, 01, 02, . . .)

VTAM APPL Parameters

The parameters follow the ACBNAME. All parameters in the VTAM APPL definition must be defined for every VTAM APPL definition. The following is an example of a valid VTAM APPL definition that the ISPF interface can use:

```

72
ENT00 APPL ACBNAME=ENT00,           X
      AUTH=(TSO,ACQ),              X
      APPC=YES,                    X
      PARSESS=YES,                 X
      VPACING=7,                   X
      AUTOSES=2,                   X
      DLOGMOD=TESTLU62,           X
      DMINWNL=1,                   X
      DMINWNR=1,                   X
      DRESPL=ALLOW,               X
      DDRAINL=ALLOW,             X
      DSESLIM=2,                  X
      MODETAB=MODEAPPC

```

Defining a Group of VTAM APPLs

The number of APPL definitions is determined by the number of concurrent users that are using the ISPF interface. No one-to-one correlation between the total number of ISPF users defined to your system and the number of VTAM APPLs required exists.

When a user invokes the ISPF interface, the interface selects the first available unused VTAM APPL. Therefore, an ISPF user is not always using the same VTAM APPL.

You can define VTAM APPLs with several different prefixes (by function, department, and so on). However, each ACBNAME group must follow the rule concerning the last two digits (ENT00, ENT01, ENT02, and so on). For example, the following list of VTAM APPLs is valid if defined as a group:

Note: The ACBNAME value defines the ISPF connection definitions. This is done during the initial customization of the ISPF interface and uses option 10.3, ISPF interface Connection Definitions.

ENT00 APPL ACBNAME=ENT00,	72
AUTH= (TSO, ACQ) ,	X
APPC=YES ,	X
PARSESS=YES ,	X
VPACING=7 ,	X
AUTOSES=2 ,	X
DLOGMOD=TESTLU62 ,	X
DMINWNL=1 ,	X
DMINWNR=1 ,	X
DRESPL=ALLOW ,	X
DDRAINL=ALLOW ,	X
DSESLIM=2 ,	X
MODETAB=MODEAPPC	
ENT01 APPL ACBNAME=ENT01,	X
AUTH= (TSO, ACQ) ,	X
APPC=YES ,	X
PARSESS=YES ,	X
VPACING=7 ,	X
AUTOSES=2 ,	X
DLOGMOD=TESTLU62 ,	X
DMINWNL=1 ,	X
DMINWNR=1 ,	X
DRESPL=ALLOW ,	X
DDRAINL=ALLOW ,	X
DSESLIM=2 ,	X
MODETAB=MODEAPPC	
ENT02 APPL ACBNAME=ENT02,	X
AUTH= (TSO, ACQ) ,	X
APPC=YES ,	X
PARSESS=YES ,	X
VPACING=7 ,	X
AUTOSES=2 ,	X
DLOGMOD=TESTLU62 ,	X
DMINWNL=1 ,	X
DMINWNR=1 ,	X
DRESPL=ALLOW ,	X
DDRAINL=ALLOW ,	X
DSESLIM=2 ,	X
MODETAB=MODEAPPC	
.	
.	
.	
ENT78 APPL ACBNAME=ENT78,	X
.	
.	
.	

Establishing Security for the VSAM Administration File

All ISPF interface users must have at least READ access authority to the VSAM administration file. The following functions require WRITE access authority to the VSAM administration file:

- ◆ Sterling Connect:Enterprise connection definitions
- ◆ ISPF interface definitions
- ◆ CONNECT model maintenance
- ◆ Batch utility model maintenance

To restrict the use of these functions, create a security rule that permits appropriate WRITE access to the VSAM administration file.

Note: At least one person must have WRITE authority to the VSAM administration file to create the required Sterling Connect:Enterprise connection definitions and ISPF interface definitions.

Specifying Function-Level Security

You can restrict users to certain functions within the ISPF interface, or limit functions to certain Sterling Connect:Enterprise systems. Two security exits implement this level of control within the ISPF interface.

- ◆ Use the ISPF function initiation security exit MZMCPFIX to restrict individual or groups of interface functions to certain users.
- ◆ Use the ISPF function request security exit MZAPCFRX to restrict communications to certain Sterling Connect:Enterprise systems and reject communications requests made to Sterling Connect:Enterprise systems.

Refer to the *IBM Sterling Connect:Enterprise for z/OS Application Agents and User Exits Guide* for more information on these exits. Additionally, several exits within the Sterling Connect:Enterprise system further control user functions.

Customizing the ISPF Interface

If you are using the ISPF interface for the first time, complete the following actions when prompted:

- ◆ Define connection definitions
- ◆ Identify VTAM APPL prefixes to the ISPF interface

If you are using an updated version of the Sterling Connect:Enterprise ISPF interface, and did not define a new VSAM administration file, you do not have to perform this procedure.

Define Connection Definitions

You must define several attributes associated with a Sterling Connect:Enterprise system before the ISPF interface can communicate with it. Use the Connect:Enterprise Connection Definitions screen, option 10.2 on the IBM Sterling Connect:Enterprise Interface Primary Menu, to define:

- ◆ A Mailbox name for logging on to the system

- ◆ The VTAM mode name and VTAM Netname that this Sterling Connect:Enterprise system is using

Define a connection definition for each Sterling Connect:Enterprise system in your network. You can add, change, or delete entries at a later time, if needed.

The first time you invoke the ISPF interface, the software automatically invokes the connection definitions function. You need WRITE access to the administration file to update the connection definitions.

Identify VTAM APPL Prefixes to the ISPF Interface

After you have defined the VTAM APPL definitions that are used by the ISPF interface, you must identify them to the ISPF interface. Use the ISPF Interface Connection Definition screen, option 10.3 on the IBM Sterling Connect:Enterprise Interface Primary Menu, to accomplish this.

Use this screen to list the defined VTAM APPL prefixes. They are listed in the order the APPL IDs are used.

The first time you invoke the ISPF interface, the software automatically invokes this function. You need WRITE access to the administration file to update the VTAM APPL group definitions.

Automated Sterling Connect:Enterprise Logon

Each time TSO users invoke the ISPF interface, they must identify the target Sterling Connect:Enterprise system they are using. This is done by using option 50, Security, and is required before any functions can be processed. This identification can be automated by setting several default values using the Defining Global Defaults (option 10.1) function. Each user has to set the defaults individually, because global defaults are specified on a per user basis.

Refer to the *IBM Sterling Connect:Enterprise for z/OS ISPF User's Guide* for more information on the global defaults that must be specified for automatically identifying the target Sterling Connect:Enterprise during initial invocation.

Installing the CICS Interface

The Sterling Connect:Enterprise CICS interface handles Sterling Connect:Enterprise administrative functions in the CICS IRC/ISC environment. Before you begin the installation, review the *IBM Sterling Connect:Enterprise for z/OS Release Notes* to ensure that your host system meets all requirements.

Unloading the Distribution Tape

The Sterling Connect:Enterprise distribution tape, which uses standard labels, contains the CICS interface files listed in the following table:

File	Description
CECICS.LOAD LABEL-6	Contains the link-edited CICS interface load modules. The load modules must reside in a library that is defined by DFHRPL in your CICS system startup JCL.
CECICS.VSAM LABEL-12	Contains the CICS administration file data records.

By default, the CECICS.LOAD file is unloaded to the output file listed in the following table. The Sterling Connect:Enterprise documentation refers to the file using the default name; however, you can assign a different name when you edit the CECIUNLD JCL to unload the file.

Data Set Name	Format	LRECL	BLKSIZE	DIR BLOCKS	3390 Tracks Required
ENTPRS.CICS.LOAD	U	0	6144	25	85

To unload the CICS interface files from the distribution tape:

1. Modify the example member CECIUNLD in the ENTRPRS.EXAMPLE library for your system.
2. If your OUTFILE has already been allocated, verify that the installation data sets are empty before you unload the tape.
3. Replace the job card in the JCL with a valid job card.
4. Replace XXXX in the JCL with the DASD unit number where you intend to unload the installation data sets.
5. Submit the JCL.

For a description of the members of the ENTRPRS.EXAMPLE library that are specific to the CICS interface, see *CICS Interface Files* on page 24.

Defining and Initializing the CICS Interface Administration File

The VSAM administration file is a key-sequenced data set that stores CICS interface information, such as:

- ◆ Help text and message library text records created during installation
- ◆ Records added during initial system startup
- ◆ Connection definitions that identify remote Sterling Connect:Enterprise VTAM systems
- ◆ Batch ADD, Batch EXTRACT, and Auto Connect Model definitions
- ◆ Records to save terminal screens between transactions

If you have already installed a version of the Sterling Connect:Enterprise CICS interface, you do not have to create a new administration file. You can retain and update your existing CICS interface administration file with new Message Library and Help text records and preserve existing definitions (connections, exits, or models). Any Help records that you created are preserved; any system-supplied Help records that you modified are replaced. To update your CICS administration file, go to the procedures in *Retaining an Existing CICS Administration File* on page 65.

To create a CICS administration file for a new installation, or to replace your CICS administration file, perform the procedures in *Creating a New CICS Administration File* on page 64.

Creating a New CICS Administration File

To create a new CICS administration file:

1. Edit the JCL in the ENTRPRS.EXAMPLE (CECIVDEF).
2. Replace ? in the JCL with the appropriate values for your system.

The approximate disk space required for a minimum size file (7000 records) is 500 tracks for a 3390 disk.

3. Replace all data set names with names of your choice.

4. Increase the RECORDS value if you plan to add many Help text records or model records.
Every CICS terminal that uses Sterling Connect:Enterprise at your installation will have 10 records added to this file for every logon of a unique occurrence of a terminal ID. These records store terminal screens between transactions. These records are not deleted until the CICS region is restarted. Plan for significant file growth as the number of users increases.
5. Define the remaining VSAM initialization parameters in accordance with the VSAM standards followed at your site.

Do not change the definition for the file attributes (SHAREOPTIONS, CISZ, KEYS, and RECSZ) in the installation JCL. Modifying any of these parameters can cause system malfunction.
6. Submit the JCL to create the VSAM administration file.

Note: As with any VSAM-indexed file, the administration file can require occasional reorganization. How occasional depends on the number of connection definitions or model records that you add or delete, and the number of Help text modifications and additions.

7. Update the administration file Message library and Help text records from the distribution tape using the procedure in *Updating the Administration File* on page 66.

Retaining an Existing CICS Administration File

If you are updating your CICS administration file, you may need to expand the file size. Refer to *Expanding the Administration File* on page 65 for instructions. To update the administration file without expanding it, continue with the procedure in *Updating the Administration File* on page 66.

Expanding the Administration File

The minimum size of the administration file is 7000 records. You may need to expand your existing administration file before you unload the Help text and Message Library records from the distribution tape, depending on your administration file definition and contents.

To expand your administration file:

1. Edit the CECIVDEF JCL in the ENTPRS.EXAMPLE.
2. Replace ? in the JCL with the appropriate values for your system.
3. Replace all data set names with names of your choice.
4. Increase the RECORDS value if you plan to add many Help text records or model records.
5. Define the remaining VSAM initialization parameters in accordance with the VSAM standards followed at your site.
6. Preserve all required parameter values.
7. Submit the JCL to create a new cluster.
8. Copy your current administration file into the new cluster.
9. Continue with *Updating the Administration File* on page 66.

Updating the Administration File

To update the new or existing administration file with current Message Library and Help text records:

1. Edit the CECIVREP JCL in the ENTPRS.EXAMPLE library.
2. Replace the CIADMFL data set name with the name of the existing CICS administration file.
Do not remove the REPLACE command from the REPRO statement. If REPLACE is not specified, the job fails with duplicate record errors.
3. Submit the JCL to update the administration file.
4. Specify the administration file in the CICS process with DD ??ADMFL, where ?? represents your user-defined two-letter prefix, if you use a prefix other than CM, the default. See *Renaming the CICS Interface* on page 67 for more information.

Creating the CICS Definitions

To complete the installation, ensure that your Sterling Connect:Enterprise system operates correctly by verifying your VTAM definitions and CICS operational environment. After you install the CICS interface, you must define its resources to CICS.

Verifying the VTAM Definition

Review the ACF/VTAM application definition for your CICS system for the following options in the VTAM APPL statement:

Option	Description
AUTH=(ACQ,VPACE,....)	Enables CICS to acquire LUTYPE6 sessions and to control pacing of intersystem flows
VPACING=n	Specifies the pacing rate
EAS=n	Specifies the number of network-addressable units with which CICS can establish sessions
PARSESS=YES	Enables LUTYPE6 parallel session support
SONSCIP=YES	Enables session outage notification support

Note: Do not specify APPC=YES in the VTAM APPL statement in your ACF/VTAM application definitions.

The following is a sample CICS VTAM definition:

CICSAPPL APPL	AUTH= (PASS, ACQ, VPACE) ,	*
	VPACING=60 ,	*
	EAS=25 ,	*
	PARSESS=YES ,	*
	HAVAIL=YES ,	*
	SONSCIP=YES	*

Define ACF/VTAM LOGMODE entries for the following:

- ◆ Every mode name that you supply when defining LUTYPE6.2 links
- ◆ The LU services manager mode set (SNASVCMG)

For a complete discussion of intersystem connectivity, please see the IBM document *Intercommunication Guide*.

Verifying the CICS Operational Environment

Review the system initialization table (DFHSIT) definition, or any initialization overrides, for the following option:

Option	Description
ISC=YES	Enables intercommunications programs

You must specify the parameter ISC=YES in the system initialization table (SIT) to include the CICS Intercommunication Group Programs. These programs are required for processing the LU6.2 protocol within CICS.

Renaming the CICS Interface

By default, Sterling Connect:Enterprise uses the prefix CM for all its program, mapsets, file, and transaction resource definitions. It may become necessary to rename the CICS interface, perhaps due to installation standards at your site or to eliminate naming conflicts. You can change the two-character prefix (CM) to any acceptable combination of characters. After you change these definitions, internally assigned resources, such as Temporary Queue names and enqueue names, use the same two-character prefix as the rest of the CICS interface system. If you use a prefix other than CM, an additional installation step is required.

Connection definitions are the exception to this rule. No standard connection definition is delivered with the CICS interface, so no standard name needs modification and no internally defined resource is affected. You are responsible for complete definition of the connections and must subsequently define these connections to the CICS interface. Any connection identifiers (names) that you select are acceptable to the CICS interface.

Defining Application Resources to CICS Using the IBM DFHCSDUP Utility

You define the following Sterling Connect:Enterprise CICS interface resources to your CICS region.

Definition	Mapset
CSD MAPSET	Define one CSD mapset definition per mapset.
CSD PROGRAM	Define one CSD PROGRAM definition per program.
CSD TRANSACTION	Define one CSD TRANSACTION definition per transaction.
CSD FILE	Define one CSD FILE definition per CICS interface administration file.
CSD CONNECTIONS	Define one CSD CONNECTIONS definition per Sterling Connect:Enterprise connection.
CSD SESSIONS	Define one CSD SESSIONS definition per connection definition. Because CICS can contain many connection definitions, the CICS interface requires that you define which connection definitions are for use between the CICS interface and Sterling Connect:Enterprise. This definition Process is accomplished using option 10.3, LU6.2 Connections Definitions Update in the Administration Functions section of the CICS interface.

The CSD definitions required for the Sterling Connect:Enterprise CICS interface depend on whether this is a new installation or an upgrade from a version of the Connect:Mailbox or the Sterling Connect:Enterprise CICS interface.

Creating CICS CSD Definitions for a New Installation Using the RDO Utility

To create CSD definitions when no earlier version of the Connect:Mailbox or the Sterling Connect:Enterprise CICS interface is installed, use the CECICIN1 and CECICIN2 example members.

Note: This procedure describes editing and running the CECICIN1 and CECICIN2 JCLs sequentially, but that is not required. You can run the CECICIN2 JCL before or after the CECICIN1 JCL and run it many times with different connection/session definitions.

1. To create mapset, program, transaction, and file definitions, modify the CECICIN1 example member as follows:
 - a. Edit the STEPLIB DD parameter to point to your CICS SDFHLOAD library.
 - b. Edit the DFHCSD DD parameter to point to your CICS region CSD file.
 - c. Change ?? to CM or your selected 2-letter prefix in definitions for file, programs, mapsets, and transactions.
 - d. Supply a valid job card and submit the CECICIN1 JCL.
2. Modify the example member CECICIN2 as follows:
 - a. Edit the STEPLIB DD parameter to point to your CICS SDFHLOAD library.
 - b. Edit the DFHCSD DD parameter to point to your CICS region CSD file.

- c. Edit the CECICIN2 JCL to define job variables and supply connection, netname, mode name, and session values for your system.
 - d. Change ?? to CM or your selected 2-letter prefix.
 - e. Supply a valid job card and submit the CECICIN2 JCL.
3. If you use a prefix other than CM in the CECICIN1 JCL, run CECICRNM.

Note: RC=4 is acceptable for these RDO jobs.

After you rename the system, you can write an API to LINK program ??62002, where ?? represents the new prefix you assigned.

Upgrading CICS CSD Definitions Using the RDO Utility

To upgrade CICS CSD definitions:

1. Select the example member that applies to your site from the following table:

To Upgrade from	Use This Example Member
Connect:Mailbox - any version	CECICUPM
Sterling Connect:Enterprise, version 1.0.00	CECICUP0
Sterling Connect:Enterprise, version 1.1.00	CECICUP1
Sterling Connect:Enterprise version 1.2.00	CECICUP2
Sterling Connect:Enterprise version 1.3.00	CECICUP3

2. Edit the CECIxxxx example member for your site.
3. Supply a valid job card and submit the CECIxxxx JCL.
4. If you use a prefix other than CM, run CECICRNM.

Note: RC=4 is acceptable for these RDO jobs.

After you rename the system, you can write an API to LINK program ??62002, where ?? represents the new prefix you assigned.

Additional CICS Installation Considerations

The following topics describe warm starting the CICS interface and optional security considerations.

Warm Starting Temporary Storage in CICS

If your CICS region does a warm start of temporary storage meaning that the CICS region comes up warm and there is no TS=COLD condition, you must run CMRESET during the third phase of CICS initialization. If you renamed your CICS interface (see *Defining Application Resources to CICS Using the IBM DFHCSDUP Utility* on page 68), you must also install and rename CMRESET.

To install CMRESET:

1. Assemble and link PLT LOAD module into your CICS SDFHLOAD library using the following macro statements.

```
DFHPLT TYPE=INITIAL, SUFFIX=yy
DFHPLT TYPE=ENTRY, PROGRAM=DFHDELIM
DFHPLT TYPE=ENTRY, PROGRAM=xxRESET
DFHPLT TYPE=FINAL
END
```

2. Change the xxRESET file name to match the new name of the interface.
3. Change yy to the PLT LOAD module suffix you are using. For example, the preceding macro statements creates LOAD module DFHPLTy in SDFHLOAD.
4. Specify PLTPI=yy in your CICS SIT table or in your CICS SIT override statements, where yy represents the module suffix.
5. Create a program entry for xxRESET. The following is a sample RDO Macro program definition:

```
DEFINE PROGRAM(xxRESET) GROUP(CEINST)
LANGUAGE (ASSEMBLER)
RELOAD(NO)
RESIDENT(NO)
USAGE(NORMAL)
USELPACOPY(NO)
STATUS(ENABLED)
CEDF(YES)
DATALOCATION(BELOW)
EXECKEY(USER)
EXECUTIONSET(FULLAPI)
```

Optional Security Considerations

If you write an API to communicate with Sterling Connect:Enterprise, security in CICS version 3.x and later is implemented using an external security manager, such as RACF or other third-party security manager, or a user-written security manager.

Verifying the Sterling Connect:Enterprise Installation

The sample installations provided in this chapter enable you to test the basic operation of the Sterling Connect:Enterprise without configuring all the ODF records required for your production system. These test installations guide you through the main steps for each type of installation:

- ◆ Create the user assembly (BSC communications only)
- ◆ Create the test ODF
- ◆ Start the VSAM file server from the system console
- ◆ Execute online

Note: The test ODFs in this chapter are provided to verify the installation only. After you verify the installation, refer to the ODF configuration chapters of the *IBM Sterling Connect:Enterprise for z/OS Administration Guide* to create your site-specific ODF.

Sample Installations for Testing

This section provides two sample Sterling Connect:Enterprise installations for SNA, two sample Sterling Connect:Enterprise installations for BSC, and two sample Sterling Connect:Enterprise installations for FTP. Choose the one appropriate for testing the type of installation that you will ultimately configure.

If you use any of the model JCL, change the library names and module names as required for your installation. You also need to change UNIT and VOLSER information as required. The sample JCL uses standard names for the source and load libraries.

System 1—Small Sterling Connect:Enterprise SNA System

This Sterling Connect:Enterprise sample contains three remote sites that use default options for most parameters. Sterling Connect:Enterprise is defined as an application program named ENTPRS to VTAM.

1. Create the ODF.

Because a small system with few options is being generated, a limited ODF is required. Use the following JCL to create a basic ODF named ENTPRS.OPTFILE.TEST:

```
//GENOPT      JOB      . . . .
//STEP1       EXEC    PGM=IEBGENER
//SYSPRINT    DD      SYSOUT=*
//SYSIN       DD      DUMMY
//SYSUT2      DD      DSN=ENTPRS.OPTFILE.TEST,DISP=(NEW,KEEP),
// UNIT=3350,VOL=SER=VOLO88,SPACE=(TRK,1),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//SYSUT1      DD      *
*OPTIONS
  VPF='VSAM.POINTER.FILE.NAME'
  VTAM=YES
  PASSWORD=TESTSYS
  APPLID=ENTPRS
  VBQROTAT=2
  VBQPCT=80
*REMOTES
  NAME=RMT001
    TYPE=LU1RJE
  NAME=RMT002
    TYPE=LU1RJE
  NAME=RMT003
    TYPE=LU1RJE
/*
```

2. Start the VSAM file server from the system console:

```
S procname
```

The VSAM file server starts with the default subsystem name SRV1.

3. Start the Sterling Connect:Enterprise sample system by completing all other Sterling Connect:Enterprise installation steps, then executing the following model JCL:

```
//CMBOX       JOB      . . . .
//STEP1       EXEC    PGM=STMAIN,PARM='SRV1',REGION=4500K
//STEPLIB     DD      DSN=ENTPRS.LOAD,DISP=SHR
//SYSUDUMP    DD      SYSOUT=*
//SNAPOUT     DD      DSN=ENTPRS.SNAPOUT,DISP=SHR
//BTSNAP      DD      DSN=ENTPRS.BTSNAP,DISP=SHR
//OPTDEF      DD      DSN=ENTPRS.OPTFILE.TEST,DISP=SHR
```

System 2—Large Sterling Connect:Enterprise SNA System

This sample, as described by the following ODF, contains four remote sites, uses batch security, and uses the Auto Connect function.

The sample Sterling Connect:Enterprise system is accessed by four remote sites. Batches sent on the system contain sensitive data, so batch security is used and Mailbox IDs are assigned to all users of the system. A tailored LOGON message is sent to the remote site after a successful LOGON to

Sterling Connect:Enterprise. Because this installation is relatively new, the SNA trace function is active, and the Snapshot data set is regularly checked for unusual conditions or other errors. Sterling Connect:Enterprise is defined as an application program named ENTPRS to VTAM.

Three remote sites include an LUNAME specification so that an Auto Connect is activated for the proper remote site. Batches sent to RMT001 and RMT002 default to the card punch media, and these terminals have a disconnect interval set to two minutes. RMT003 batches are directed to the transmission exchange disk, and no disconnect interval is set for RMT003.

The fourth remote site uses logical unit name pooling and is connected to a remote site using SPC version 1.4 or later.

An Auto Connect session is activated for all four remote sites daily at 2:00 a.m. and at 4:00 a.m. Payroll, accounts receivable, and accounts payable reports for each of the sites are sent to the remote printer media. A short disconnect interval is set, because the remote sites are operating unattended and no input data is expected.

1. Create the ODF.

```

//GENOPT    JOB      ...
//STEP1     EXEC    PGM=IEBGENER
//SYSPRINT  DD      SYSOUT=*
//SYSIN     DD      DUMMY
//SYSUT2    DD      DSN=ENTPRS.OPTFILE.PROD,DISP=(NEW,KEEP),
//          UNIT=3350,VOL=SER=VOLO88,SPACE=(TRK,1),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//SYSUT1    DD      *
*OPTIONS
  VPF='VSAM.POINTER.FILE.NAME'
  VTAM=YES
  PASSWORD=SECRET
  APPLID=ENTPRS
  SECURITY=BATCH
  SCINCOR=YES
  LOGONMSG='THIS IS THE Connect:Enterprise PRODUCTION SYSTEM'
  TRACE=SNA
*SECURITY
  ID=APPLE ID=FRUIT ID=ORANGE ID=PLUM ID=BANANA
  ID=GRAPE ID=TOMATO ID=PEACH ID=MELON ID=KIWI
*REMOTES
  NAME=RMT001
  TYPE=LU1RJE
  LUNAME=LUA001
  MEDIA=PU
  DISCINTV=120
  NAME=RMT002
  TYPE=LU1RJE
  LUNAME=LUA002
  MEDIA=PU
  DISCINTV=120
  NAME=RMT003
  TYPE=LU1RJE
  LUNAME=LUA003
  MEDIA=EX
  DISCINTV=0
  NAME=RMT004
  TYPE=LU1RJE
  POOL=SPCPOOL1
  SC=SPC
*POOLS
  NAME=SPCPOOL1
  LU=SPCLU1,SPCLU2
  LU=SPCLU3,SPCLU4
*CONNECT
  LISTNAME=AUTOCALL
  TYPE=LU1RJE
  TIME=02:00,04:00
  DISCINTV=5
  RMT001 MEDIA=PR IDLIST=PAYROLL1,ACCTPAY1,ACCTREC1
  RMT002 MEDIA=PR IDLIST=PAYROLL2,ACCTPAY2,ACCTREC2
  RMT003 MEDIA=PR IDLIST=PAYROLL3,ACCTPAY3,ACCTREC3
  RMT004 MEDIA=PR IDLIST=PAYROLL4,ACCTPAY4,ACCTREC4
/*

```

2. Start the VSAM file server from the system console:

```
S procname
```

The VSAM file server starts with the default subsystem name SRV1.

3. Start the Sterling Connect:Enterprise sample system by completing all other Sterling Connect:Enterprise installation steps, then executing the following model JCL:

```
//CMBOX      JOB      ....
//STEP1      EXEC    PGM=STMAIN, PARM='SRV1', REGION=4500K
//STEPLIB    DD      DSN=ENTPRS.LOAD, DISP=SHR
//SYSUDUMP    DD      SYSOUT=*
//SNAPOUT    DD      DSN=ENTPRS.SNAPOUT, DISP=SHR
//BTSNAP     DD      DSN=ENTPRS.BTSNAP, DISP=SHR
//OPTDEF     DD      DSN=ENTPRS.OPTFILE.PROD, DISP=SHR
```

System 3—Small Sterling Connect:Enterprise BSC System

The Sterling Connect:Enterprise sample system 3 contains three lines:

- ◆ Two BSC switched lines, named LINE001 and LINE002. Units 028 and 029 generated for use by the Sterling Connect:Enterprise switched lines on the host system.
- ◆ One BSC nonswitched point-to-point line, named TEST3780. Unit 050 generated for the line on the host system.

1. Create the user assembly.

Use the following model JCL to assemble and link a user assembly module named NETWORK1:

```
//USERASM      JOB      ...
//STEP1      EXEC    ASMFCL, PARM.LKED=(NCAL,LIST,XREF)
//ASM.SYSLIB  DD      DSN=ENTPRS.SOURCE, DISP=SHR
//           DD      DSN=SYS1.MACLIB, DISP=SHR
//ASM.SYSIN   DD      *
M$LINEX ID=LINE001,TYPE=BSCSW
M$LINEX ID=LINE002,TYPE=BSCSW
M$LINEX ID=TEST3780,TYPE=BSCNS
M$ENDX
END
//LKED.SYSLMOD DD      DSN=ENTPRS.LOAD(NETWORK1), DISP=SHR
//*
```

2. Create the ODF.

Because a small network with few options is being generated, a limited ODF is required. Use the following model JCL to create a basic ODF named ENTPRS.OPTFILE.TEST:

```

//GENOPT      JOB      . . . .
//STEP1       EXEC    PGM=IEBGENER
//SYSPRINT    DD      SYSOUT=*
//SYSIN       DD      DUMMY
//SYSUT2      DD      DSN=ENTPRS.OPTFILE.TEST,DISP=(NEW,KEEP),
// UNIT=3350,VOL=SER=VOL088,SPACE=(TRK,1),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//SYSUT1      DD      *,DLM=ZZ
*OPTIONS
VPF='VSAM.POINTER.FILE.NAME'
BTAM=YES
PASSWORD=TESTNET
UA=NETWORK1
ZZ

```

3. Start the VSAM file server from the system console:

```
S procname
```

The VSAM file server starts with the default subsystem name SRV1.

4. Bring up online Sterling Connect:Enterprise by completing all other Sterling Connect:Enterprise installation steps, then execute the following JCL:

```

//CMBOX       JOB      . . . .
//STEP1       EXEC    PGM=STMAIN,PARM='SRV1',REGION=4500K
//STEPLIB    DD      DSN=ENTPRS.LOAD,DISP=SHR
//SYSUDUMP    DD      SYSOUT=*
//SYSPRINT    DD      SYSOUT=*
//SNAPOUT    DD      DSN=ENTPRS.SNAPOUT,DISP=SHR
//BTSNAP     DD      DSN=ENTPRS.BTSNAP,DISP=SHR
//OPTDEF     DD      DSN=ENTPRS.OPTFILE.TEST,DISP=SHR
//LINE001    DD      UNIT=028      SWITCHED LINE LINE001
//LINE002    DD      UNIT=029      SWITCHED LINE LINE002
//TEST3780   DD      UNIT=050      LEASED LINE TEST3780

```

System 4—Large Sterling Connect:Enterprise BSC System

The Sterling Connect:Enterprise sample system 4 contains eight lines:

- ◆ A BSC switched line named LINE001 on Unit 028
- ◆ A BSC switched line named LINE002 on Unit 029
- ◆ A BSC switched line named LINE003 on Unit 030
- ◆ A BSC switched line named LINE004 on Unit 031
- ◆ A BSC switched line named LINE5AD on Unit 032 equipped with the SADL autodial function
- ◆ A BSC switched line named LINE6AD on Unit 033 equipped with the SADL autodial function
- ◆ A BSC nonswitched leased line named PROD3780 on Unit 050
- ◆ A BSC nonswitched leased line named PROD2780 on Unit 051

The remote terminal on this line is a 2780 that requires a record separator of X'1F' when sending and receiving blocked records.

1. Create the user assembly for sample system 4.

Use the following model JCL to assemble and link a user assembly module named NETWORK:

```
//USERASM JOB    ... AS REQUIRED FOR YOUR SITE
//*****
//*    RUN THE Sterling Connect:Enterprise USER ASSEMBLY
//*****
//*
//USERASM      EXEC  ASMFCL, PARM.LKED=(NCAL,LIST,XREF)
//ASM.SYSLIB   DD   DSN=ENTPRS.SOURCE,DISP=SHR
//            DD   DSN=SYS1.MACLIB,DISP=SHR
//ASM.SYSIN    DD   *
M$LINEX ID=LINE001,TYPE=BSCSW,BCHSEP=OPT2  *
M$LINEX ID=LINE002,TYPE=BSCSW,RECSEP=1E    *
M$LINEX ID=LINE003,TYPE=BSCSW,RECSEP=1E    * SAMPLE
M$LINEX ID=LINE004,TYPE=BSCSW,RECSEP=1E    * ONLY
M$LINEX ID=LINE5AD,TYPE=BSCSW,MODEM=SADL  *
M$LINEX ID=LINE6AD,TYPE=BSCSW,MODEM=SADL  *
M$LINEX ID=PROD3780,TYPE=BSCNS            *
M$LINEX ID=PROD2780,TYPE=BSCNS,RECSEP=1F  *
M$ENDX
END
//LKED.SYSLMOD DD   DSN=ENTPRS.LOAD(NETWORK),DISP=SHR
//*
```

2. Create the ODF.

This sample Sterling Connect:Enterprise network, described by the ODF, is accessed by a variety of remote sites located across the United States. Because some of the batches sent and received from the host contain sensitive data, full security is used on the system. All accesses to the system over switched lines must provide a valid Mailbox ID to send or request batches. The host site has assigned Mailbox IDs to the remote sites in the range REMOT001-REMOT004. Because new remote sites are added to or dropped from the system weekly, not all Mailbox IDs are currently assigned.

The ODF is changed frequently to add and delete the Mailbox IDs.

Only the two leased lines can send in data without a valid Mailbox ID. Their line IDs are defined as valid Mailbox IDs, which permits any input on those lines.

The two autodial lines, LINE5AD and LINE6AD, automatically dial different remote sites in cities within the United States. The Auto Connect function calls the remote sites automatically every morning at 2:00 a.m. and 4:00 a.m. to send and receive data batches.

```

//OPTBSC JOB ... AS REQUIRED FOR YOUR SITE
//*****
//* GENERATE THE OPTIONS DEFINITION FILE
//*****
//*
//GENOPT EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
//SYSUT2 DD DSN=ENTPRS.OPTFILE,DISP=(NEW,KEEP),UNIT=XXXX,
// VOL=SER=NNNNNN,SPACE=(TRK,(1,1)),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
//*
//* THE FOLLOWING IS SAMPLE DATA ONLY
//*
//SYSUT1 DD DATA,DLM=ZZ
*OPTIONS
** THIS IS A COMMENT CARD, COMMENTS START WITH "***"
BTAM=YES
VPF='VSAM.POINTER.FILE.NAME'
PASSWORD=ENTPRS
UA=NETWORK USER ASSEMBLY SYSLMOD NAME
SECURITY=BATCH
ACQDEFAULT=YES
*SECURITY
ID=REMOT001 ID=REMOT002 ID=REMOT003 ID=REMOT004
ID=PROD3780 ID=PROD2780
*CONNECT
LISTNAME=ECOAST
TYPE=BSCAD
TIME=02:00, 04:00
BOSTON 11 16175551212 MODE=RECVONLY
NEWYORK 11 12125551212 MODE=RECVONLY
LISTNAME=WCOAST
TYPE=BSCAD
TIME=02:00, 04:00
SEATTLE 07 8782947 MODE=SENDONLY
SANFRAN 07 8872947 MODE=SENDONLY
LISTNAME=JESLIST
TYPE=BSCAD
TIME=02:00,04:00
JES=YES
SIGNOFF=YES
DISCINTV=300
JES01 07 5551212 MODE=SENDRECV BLOCK=5 CMP=Y
/*SIGNON RMT050 PASSWRD1
JES02 07 5551313 MODE=SENDRECV BLOCK=5 CMP=Y
/*SIGNON RMT051 PASSWRD2
ZZ

```

3. Start the VSAM file server from the system console:

```
S procname
```

The VSAM file server starts with the default subsystem name SRV1.

4. Execute the Sterling Connect:Enterprise sample system 4.

Start Sterling Connect:Enterprise by completing all other Sterling Connect:Enterprise installation steps, then executing the following JCL:

```
//CMBOX JOB ... AS REQUIRED FOR YOUR SITE
//*****
//* EXECUTE Sterling Connect:Enterprise ONLINE
//*****
//*
//* STEP 1: EXECUTE Sterling Connect:Enterprise
//* (REQUIRED)
//*
//CMBX EXEC PGM=STMAIN, PARM='SRV1', REGION=4500K
//*
//STEPLIB DD DSN=ENTPRS.LOAD, DISP=SHR
//SYSUDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//LINE001 DD UNIT=028 *
//LINE002 DD UNIT=029 * SAMPLE
//LINE003 DD UNIT=030 * NETWORK
//LINE004 DD UNIT=031 * ONLY
//LINE5AD DD UNIT=032 *
//LINE6AD DD UNIT=033 *
//PROD3780 DD UNIT=050 *
//PROD2780 DD UNIT=051 *
//OPTDEF DD DSN=ENTPRS.OPTFILE, DISP=SHR
//SNAPOUT DD DSN=ENTPRS.SNAPOUT, DISP=SHR
//BTSNAP DD DSN=ENTPRS.BTSNAP, DISP=SHR
//*
```

System 5—Small Sterling Connect:Enterprise FTP System

This system, as defined by the following ODF, contains one client remote site and one server remote site. The sample Sterling Connect:Enterprise acts as both an FTP server and an FTP client. The Auto Connect list named FTPLIST starts logon script FTPLOGON to connect to remote FTPRMT.AC_SCRIPT COMPANYA, and sends batches from mailbox MBXABC to the remote FTP server. Remote FTP clients can establish a session with Sterling Connect:Enterprise through remote FTPCLNT.

1. Use the following JCL to create a basic ODF name ENTPRS.OPTFILE.TEST:

```

//GENOPT          JOB.....
//STEP1          EXEC PGM=IEBGENER
//SYSPRINT       DD  SYSOUT=*
//SYSIN         DD  DUMMY
//SYSUT2        DD  DSN=ENTPRS.OPTFILE.TEST,DISP=(NEW,KEEP),
//              UNIT=3380,VOL=SER=VOLnnnn,SPACE=(TRK,1),
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//SYSUT1        DD  *
*OPTIONS
  VPF='VSAM.POINTER.FILE.NAME'
  APPLID=XXXXXXXX
  VBQROTAT=2
  VBQPC=90
  VTAM=YES
  MODIFY=YES
  SSL=NO
  FTP=YES
  FTP_MAX_SERVER_THREADS=4
  FTP_MAX_CLIENT_THREADS=4
  FTP_SERVER_CONTROL_PORT=nnnn
  FTP_LOGON_SCRIPT_DEFAULT=FTPLOGON
  FTP_LOGON_REPLY=2
You are logged onto Connect:Enterprise 1.2.00 FTP Server.
SSL use is OFF.
*CONNECT
  LISTNAME=FTPLIST
  TYPE=FTP
  ACQUEUE=YES
  FTPRMT BCHSEP=OPT3 OB=N AC_SCRIPT=COMPANYA
*REMOTES
  NAME=FTPRMT
  TYPE=FTP_SERVER
  NAME=FTPCLNT
  TYPE=FTP_CLIENT

```

2. Start the VSAM file server from the system console.

```
S procname
```

The VSAM file server starts with the default subsystem name SRV1.

3. Scripts FTPLOGON and COMPANYYA are members of library ENTPRS.REXX.SCRIPTS. Start the Sterling Connect:Enterprise sample system by completing all other Sterling Connect:Enterprise installation steps, then executing the following model JCL:

```

//CMBOX          JOB.....
//STEP1          EXEC PGM=STMAIN, PARM='SRV1', REGION=0K
//STEPLIB       DD  DSN=ENTPRS.LOAD,DISP=SHR
//SYSUDUMP      DD  SYSOUT=*
//SNAPOUT      DD  DSN=ENTPRS.SNAPOUT,DISP=SHR
//BTSNAP       DD  DSN=ENTPRS.BTSNAP,DISP=SHR
//OPTDEF       DD  DSN=ENTPRS.OPTFILE.TEST,DISP=SHR
//SYSEXEC      DD  DSN=ENTPRS.REXX.SCRIPTS,DISP=SHR

```


4. Verify that the FTPLOGON and COMPANYA scripts are in ENTPRS.REXX.SCRIPTS before starting Auto Connect FTPLIST.

```
/* FTPLOGON REXX */
"OPEN MVSA,5566"
"USER BREMOTE"
"PASS BANANA"
exit 0
```

```
/* COMPANYA REXX */
"LOCCD MBXABC"
"PUT *"
"QUIT"
exit 0
```

System 6 – Large Sterling Connect:Enterprise FTP System

The system defined by the following ODF contains both client and server remote sites. The sample Sterling Connect:Enterprise acts as both an FTP server and an FTP client. SSL security is turned on but its use is optional. The Auto Connect list named EASTERN starts logon script LOGNY which connects to remote NYRMT. The AC script ACNY sends batches from mailbox NEWYORK to the remote FTP server. Auto Connect list EASTERN also connects to remote VIRRMT using logon script LOGVIR and uses AC_SCRIPT ACVIR to send batches from mailbox VIRGINIA to the remote FTP server. When Auto Connect list WEST is run, logon script FTPLOGON (*OPTION default) connects to both CARMT and WASHRMT. The script variables USERID, PASSWORD, PORTNO, and IPADDR are passed to logon script FTPLOGON and set for CARMT and WASHRMT using the *REMOTES ODF parameters. AC_SCRIPT SENDONLY is used for both CARMT and WASHRMT after the FTPLOGON script is run. Batches from mailbox CALIFOR are sent to remote CARMT, and batches from mailbox WASHGTN are sent to remote WASHRMT. Remote FTP clients can establish a session with Sterling Connect:Enterprise through remote FTPCLNT or FTPCLNT2.

1. Use the following JCL to create a basic ODF named ENTPRS.OPTFILE.TEST:

```

//GENOPT      JOB.....
//STEP1       EXEC PGM=IEBGENER
//SYSPRINT    DD  SYSOUT=*
//SYSIN       DD  DUMMY
//SYSUT2      DD  DSN=ENTPRS.OPTFILE.TEST,DISP=(NEW,KEEP) ,
//            UNIT=3380,VOL=SER=VOLnnnn,SPACE=(TRK,1) ,
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=800)
//SYSUT1      DD  *
*OPTIONS
VPF= 'VSAM.POINTER.FILE.NAME'
APPLID=XXXXXXXX
VBQROTAT=2
VBQPCT=90
VTAM=YES
MODIFY=YES
SSL=YES
SSL_KEY_DBASE_PW='SEC'
SSL_KEY_DPASE='U/KSTIC1/'
SSL_TIMEOUT=00300
SSL_SERVER_CERT='SERVER1'
SSL_CIPHER_SUITE=06010203
SSL_DEFAULT_POLICY=OPTIONAL
SSL_DEFAULT_CLIENT_AUTH_POLICY=OPTIONAL
FTP=YES
FTP_DEFAULT_DISCINTV=60
FTP_MAX_SERVER_THREADS=4
FTP_MAX_CLIENT_THREADS=4
FTP_SERVER_CONTROL_PORT=nnnn
FTP_LOGON_SCRIPT_DEFAULT=FTPLOGON
FTP_AC_SCRIPT_DEFAULT=SENDONLY
FTP_LOGON_REPLY=2
You are logged onto Connect:Enterprise 1.2.00 FTP Server.
SSL use is OFF.
*CONNECT
LISTNAME=EASTERN
TYPE=FTP
ACQUEUE=YES
NYRMT BCHSEP=OPT3 OB=N AC_SCRIPT=ACNY
VIRRMT AC_SCRIPT=ACVIR
LISTNAME=WEST
TYPE=FTP
CARMT &BEGINLIST=CALIFOR
WASHRMT &BEGINLIST=WASHGTN

```

continued on next page with *REMOTES record

```

*REMOTES
NAME=NYRMT
  TYPE=FTP_SERVER
  LOGON_SCRIPT=LOGNY
NAME=VIRRMT
  TYPE=FTP_SERVER
  LOGON_SCRIPT=LOGVIR
NAME=CARMT
  TYPE=FTP_SERVER
  &IPADDR=124.43.154.43
  &USERID=CALUSR
  &PASSWORD=HORSE
  &PORTNO=5566
NAME=WASHRMT
  TYPE=FTP_SERVER
  &IPADDR=124.43.154.43
  &USERID=WASHUSR
  &PASSWORD=FRIENDS
  &PORTNO=2352
NAME=FTPCLNT
  TYPE=FTP_CLIENT
NAME=FTPCLNT2
  TYPE=FTP_CLIENT

```

2. Start the VSAM file server from the system console:

```
S procname
```

The VSAM file server starts with the default subsystem name SRV1.

3. Scripts FTPLOGON, LOGVIR, LOGNY, SENDONLY, ACNY, and ACVIR are members of library ENTPRS.REXX.SCRIPTS. Start the Sterling Connect:Enterprise sample system by completing all other Sterling Connect:Enterprise installation steps, then executing the following model JCL:

```

//CMBOX      JOB.....
//STEP1     EXEC  PGM=STMAIN, PARM=' SRV1 ', REGION=0K
//STEPLIB   DD    DSN=ENTPRS . LOAD, DISP=SHR
//SYSUDUMP   DD    SYSOUT=*
//SNAPOUT   DD    DSN=ENTPRS . SNAPOUT, DISP=SHR
//BTSNAP    DD    DSN=ENTPRS . BTSNAP, DISP=SHR
//OPTDEF    DD    DSN=ENTPRS . OPTFILE . TEST, DISP=SHR
//SYSEXEC   DD    DSN=ENTPRS . REXX . SCRIPTS, DISP=SHR

```

4. Verify the following FTPLOGON, LOGVIR, LOGNY, SENDONLY, NEWYORI, and VIRGINIA scripts are in ENTPRS.REXX.SCRIPTS before starting the Auto Connect list, FTPLIST.

```

/* FTPLOGON REXX */
"OPEN" ipaddr, "portno
"USER"  userid
"PASS"  password
exit 0

```

```
/* LOGVIR REXX */  
"OPEN VIRSRV,4321"  
"USER VIRUSR  
"PASS MYPASS"  
exit 0
```

```
/* LOGNY REXX */  
"OPEN NYSRV,5263"  
"USER NYUSR  
"PASS DOGHOUSE"  
exit 0
```

```
/* SENDONLY REXX */  
"LOCCD" beginlist  
"PUT *"  
"QUIT"  
exit 0
```

```
/* ACVIR REXX */  
"LOCCD VIRGINIA"  
"PUT *"  
"QUIT"  
exit 0
```

```
/* ACNY REXX */  
"LOCCD NEWYORK"  
"PUT *"  
"QUIT"  
exit 0
```

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