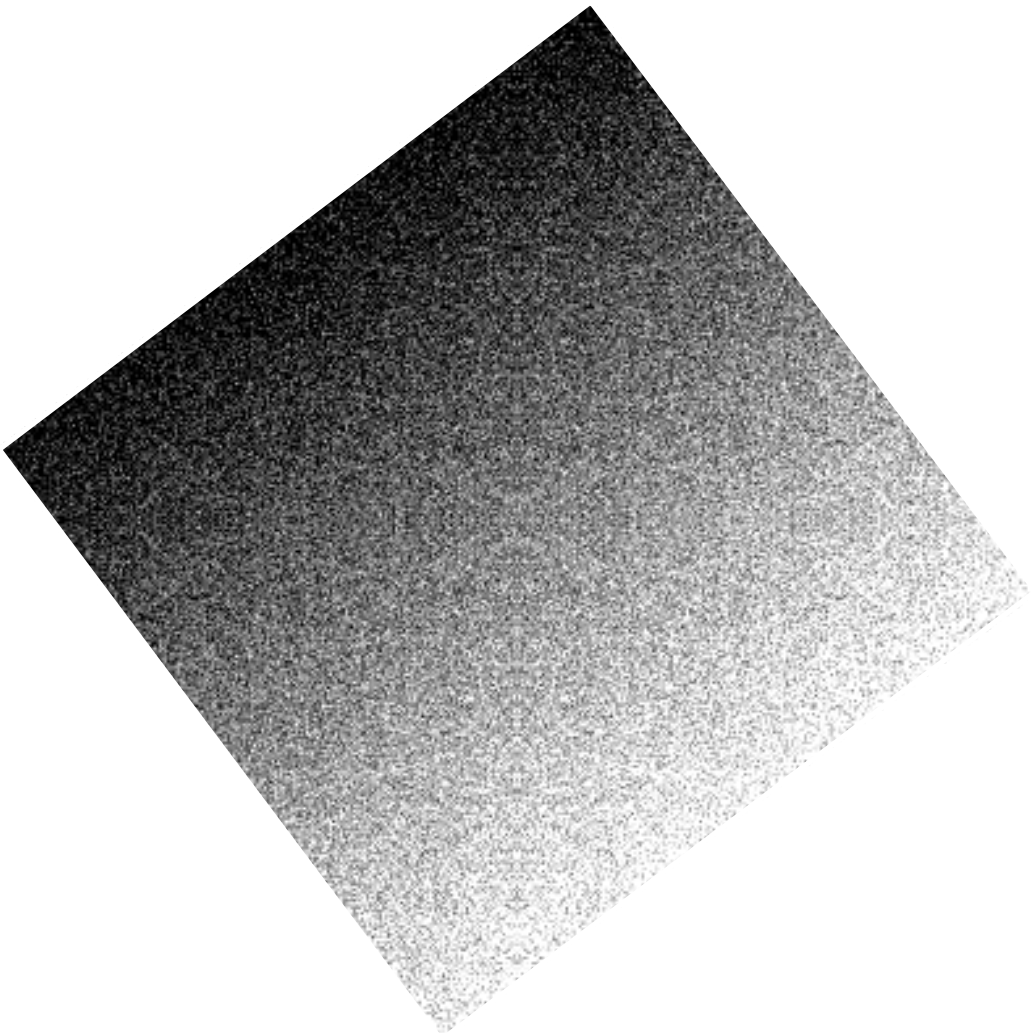
Intelligent Decision Server

IBM

Installing Host Services and Configuring Host-to-LAN Communications for MVS

Version 1



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Note

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

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About This Book

This book describes installation and configuration tasks for IBM's Intelligent Decision Server (IDS) Host Services product in an IBM Multiple Virtual Storage/Enterprise Systems Architecture (MVS/ESA) operating system environment. This book also describes configuring communications between Host Services on an MVS host workstation and IBM Communications Manager/2 on an IDS local area network (LAN). These tasks enable IDS LAN workstation users to access IBM's DATABASE 2 (DB2) relational database management system (RDBMS); they also allow IDS workstation users to access host-resident legacy data and cooperative applications through IBM's Cooperative Application Services (CAS) facility. These tasks should be performed when you first install Host Services, and when you reconfigure host-to-LAN communications at later times.

Who Should Read This Book

This book is intended for MVS system administrators responsible for installing and configuring IDS components on an MVS host workstation. This book is also intended for LAN administrators responsible for configuring Communications Manager/2 to enable communications with the host on behalf of IDS database gateway services configured to support DB2 and CAS sessions.

This book describes IDS Host Services installation and configuration tasks that are part of the duties of the following individuals in your organization:

- Systems programmer with knowledge of MVS/ESA operations
- Systems communications programmer with knowledge of Virtual Telecommunications Access Method (VTAM) and Advanced Program-to-Program Communications (APPC)
- MVS host security administrator
- Database administrator with knowledge of DB2
- LAN administrator with knowledge of APPC

Prerequisite Reading

Planning for Host Services installation and configuration is a requirement that should be completed before you install Host Services. This book makes many references to specific worksheet entries that should have been completed during the planning process. *Planning MVS Host-to-LAN Connectivity* (GC26-8880) provides information on IDS Host Services software configuration planning tasks for an SNA network environment that includes an MVS host system. It also provides instructions and worksheets for planning and coordinating the configuration of host-to-LAN communications connections for IDS.

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Chapter 1. Installing Host Services

This chapter describes installing the IDS Host Services from the MVS Host Services distribution tape onto a host system running the MVS/ESA operating system. This chapter describes:

The content of the distribution tape

How to load the distribution tape

How to authorize access to data sets

How to load optional LPA modules

Using the checkpoint data set MET.CHKPOINT for recovery

Be sure you have the following planning worksheets described in *Planning MVS Host-to-LAN Connectivity*.

Worksheet G: MVS Security Administration. Assembles security information used on the MVS host running IDS Host Services. You need one completed worksheet for each MVS host system on which you intend to install Host Services.

Worksheet H: MVS Systems Programming (General Information). Assembles general information used on the MVS host running IDS Host Services. You need one completed worksheet for each MVS host system on which you intend to install Host Services.

Contents of the Host Services Distribution Tape

The distribution tape for the IDS Host Services contains the tape data sets listed in Table 1.

Table 1 (Page 1 of 2). Distribution tape contents

File no.	Tape data set name	Purpose
1	MET.JCL	Cataloged procedures plus job control language (JCL) to load the rest of the program product and run utilities
2	MET.LOAD	Library for unauthorized programs
3	MET.LPALIB	Library for programs that must reside in the MVS link pack area (LPA)
4	MET.AUTHLIB	Library for programs that belong in the MVS link list
5	MET.RUNTIME	C-language run-time library
6	MET.DBRMLIB	DB2 database request modules that are bound into the application plans
7	MET.CONFIG	Host Services configuration members
8	MET.MVSENU	Message text

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Table 1 (Page 2 of 2). Distribution tape contents

File no.	Tape data set name	Purpose
9	MET.SAMPLIB	Sample assembler source code for user exits and for VTAM and network control program (NCP) definitions
10	MET.MACLIB	Macro library for Host Services user exits
11	MET.SQLMACRO	SQL text for the SQL macro facility
12	MET.REXXLIB	REXX procedures and samples

Appendix A, “Load Job Listing” on page 39 shows a listing of the MET.JCL load job.

Loading the Distribution Tape

The first data set on the MVS Host Services distribution tape contains a job that offloads the remaining data sets from the tape.

To load the first data set:

1. Enter the following Access Method Services (IDCAMS) command to create an alias for the high-level qualifier for IDS data set names:

   ```
   DEFINE ALIAS (NAME('alias') RELATE('user_catalog_name'))
   ```

   alias The name to be used as the high-level qualifier of Host Services data set names (see Worksheet H, line 2).

   user_catalog_name The name of an existing user catalog.

   You can issue this statement interactively from your TSO session, or you can create and submit a batch IDCAMS job.

   Examples in this book assume that you use MET as the high-level qualifier, and that you use a second-level qualifier composed of the Host Services version number. (See Worksheet H, line 1.) For example:

   ```
   MET.V1R
   ```

2. Create and submit the following JCL job to load MET.JCL, the installation JCL library:

   ```
   //LOADJCL      JOB      MSGLEVEL=(1,1),MSGCLASS=A
   //LOADJCL      EXEC       PGM=IEBCOPY
   //SYSPRINT     DD       SYSOUT=
   //SYSIN        DD       DUMMY
   //SYSUT1       DD       DSN=MET.JCL,DISP=(OLD,KEEP),
   //             UNIT=TAPE,VOL=SER=tape_volume,
   //             LABEL=(1,SL,,,EXPDT=98   )
   //SYSUT2       DD       DSN=qualifier.JCL,DISP=(,CATLG,DELETE),
   //             UNIT=SYSDA,VOL=SER=disk_volume,  SPACE=(312 ,(8 ,1 ,5))
   //             DCB=(RECFN=FB,LRECL=8 ,BLKSIZE=312
   ```

   where:

tape_volume The volume label of the distribution tape, such as HS10A. This name changes with each version of Host Services.

qualifier The Host Services' data set name qualifier, such as MET.V1R0.

disk_volume The volume label of the disk where the program is to be installed.

When prompted, mount the distribution tape on the tape drive.

3. Edit and submit the job MET.JCL(LOAD) to allocate the Host Services data sets and to load the distribution data sets to the disk. Appendix A, “Load Job Listing” on page 39 shows the listing of this job.

   The job statement might need some changes to meet your site's requirements. The default job statement is:

   ```
   //METLOAD      JOB  'LOAD  DISTRIBUTN  TAPE',MSGCLASS=A,CLASS=A
   ```

   The *DVOL* parameter specifies the volume name of the disk where the new data sets are to be created. The default value is METVOL.

   The disk must have enough space to allocate the data sets listed in Table 1 on page 1, and must have an additional track for the checkpoint data set allocated by the load job. This requires a total of about 150 tracks of 3380 disk space. See *Planning MVS Host-to-LAN Connectivity* for specific details on disk space and storage requirements.

   The *DUNIT* parameter specifies the name of the disk unit where the new data sets are to be created. The default value is SYSDA.

   The *TVOL* parameter specifies the volume label of the distribution tape.

   The *TUNIT* parameter specifies the name of the tape unit to use for reading the distribution tape. The default name is TAPE.

   The *HLQ* parameter specifies the high-level (and secondary-level, if applicable) qualifier for the data sets that are to be created. The default value is set using the conventions for the current Host Services version number.

   The *SYSOUT* parameter specifies the system output class for the load utilities. The default value is * (asterisk).

After the load jobs run successfully, Host Services is loaded in disk storage and is ready for configuration.

Authorizing Access to Data Sets

To authorize access to data sets:

1. Grant access privileges to the data sets that were created by the LOAD job as described on Worksheet G, lines 4, 5, and 6.
2. If you do not have the MET.CONFIG and MET.CHKPOINT data sets described on lines 4 and 5 of Worksheet G, then create them by renaming the MET.CONFIG and MET.CHKPOINT data sets created by the LOAD job.

This process prevents the installation of update tapes from overwriting your existing configuration.

Loading Optional LPA Modules

The following LOAD library modules load above the 16MB line. They run in service address spaces and are excellent candidates for moving into the extended link pack area (ELPA):

SQL (DB2) service address space module: METSQS

CAS API and service address space tasks: METCAAPI and METCAS

If you move METCAAPI into the ELPA, you must also move its aliases: METFCLOS, METFGET, METFOPEN, METFPUT, METMDSP, and METMGET.

All other modules in MET.LOAD run only in the service manager address space or as batch jobs; there is no reason to move them into the ELPA.

If you copy the METSQS, METCAAPI, or METCAS module from MET.LOAD to an LPA library, be sure to remove the STEPLIB DD card from the service address space cataloged procedure. Otherwise, the modules are loaded from the STEPLIB instead of using the copy in the ELPA.

Using the Checkpoint Data Set

The service manager address space JCL contains a data definition statement for a MET.CHKPOINT data set. This data set is used for recovery purposes if the service manager address space terminates abnormally. In such an event, the currently started service address spaces continue to execute normally; however, the gateway cannot issue START, STOP, or CANCEL commands through the service manager gateway-to-host conversation. When the service manager address space is started again, it attempts a hot start. The hot start reads the MET.CHKPOINT data set for state information to restore the service manager environment from the previous execution rather than as defined in the MET.CONFIG data set. The state information stored in the MET.CHKPOINT data set includes:

Header information identifying the data set and Host Services version number

Trace status

Service manager address space APPC information

Gateway service type and APPC information

Trailer information identical to the header information

Chapter 2. Configuring MVS for Host Services

This chapter describes configuring MVS to accommodate IDS Host Services. It provides instructions for performing the following tasks to change SYS1.PARMLIB and the procedure library:

- Authorizing Host Services data sets with the authorized Program Facility (APF)
- Installing the Host Services subsystem
- Installing the supervisor calls (SVC)
- Define performance groups
- Setting up cataloged procedures
- Building the connect exit

Be sure you have the following completed worksheets at hand:

- Worksheet G: MVS Security Administration. Assembles security information used on the MVS host running IDS Host Services. You need one completed worksheet for each MVS host system on which you intend to install Host Services.
- Worksheet H: MVS Systems Programming (General Information). Assembles general information used on the MVS host running IDS Host Services. You need one completed worksheet for each MVS host system on which you intend to install Host Services.
- Worksheet I: MVS Systems Programming (for IDS software). Assembles gateway information used on the MVS host running IDS Host Services. You need one completed worksheet for each gateway (DB2 or CAS) that will communicate with the host system. A particular IDS OS/2 database gateway service can be configured to run multiple gateways.
- Worksheet J: MVS Systems Programming (for CAS). Assembles CAS gateway information used on the MVS host running Host Services and Cooperative Application Services. You need one completed worksheet for each CAS cataloged procedure.
- Worksheet K: MVS Systems Programming (for DB2). Assembles DB2 gateway information used on the MVS host running Host Services. You need one completed worksheet for each SQL service (SQS) cataloged procedure for DB2 access.

Follow your site's procedures for updating SYS1.PARMLIB members and creating new ones. Changes to SYS1.PARMLIB and the LPA do not take effect until you perform an initial program load (IPL) of the MVS system. Be sure to provide a backout procedure for starting the system without the changes you make here, in case the changes cause IPL errors.

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Authorizing Host Services Data Sets with APF

Two Host Services distribution data sets, MET.AUTHLIB and MET.LPALIB, contain programs that require Authorized Program Facility (APF) authorization. Either add these libraries to the system LNKLSTxx and LPALSTxx members, or copy the programs into existing APF-authorized link list and LPA libraries.

If your site already has a link list and an LPA data set available for use by Host Services, then copy the modules in MET.AUTHLIB and MET.LPALIB to your site's link-list and LPA libraries, respectively.

If your site does not already have a link list and an LPA data set available for use by Host Services, then add the Host Services libraries to the system LNKLSTxx and LPALSTxx members by following these steps:

1. If *met* is an alias to a user catalog, then rename the MET.AUTHLIB and MET.LPALIB data sets to a name that includes them in the MVS master catalog (for example, SYS1.MET.AUTHLIB and SYS1.MET.LPALIB).
2. Update or create SYS1.PARMLIB(IEAAPFxx) to specify the data set names and their volume names.

   If SYS1.PARMLIB(IEASYSxx) specifies LNKAUTH=LNKLST, then you do not need to authorize the AUTHLIB data set; you only need to authorize the LPALIB data set.
3. Update or create SYS1.PARMLIB(LNKLSTxx) to specify the name of the AUTHLIB data set.
4. Update or create SYS1.PARMLIB(LPALSTxx) to specify the name of the LPALIB data set.
5. Update or create SYS1.PARMLIB(IEASYSxx) to point to the updated or new IEAAPFxx, LNKLSTxx, and LPALSTxx members.

Installing the Host Services Subsystem

Host Services uses a subsystem for communications between its service manager and service address spaces and for its interface with the MVS interface. You must describe the subsystem to MVS through SYS1.PARMLIB(IEFSSNxx) as explained in this section.

You can install more than one Host Services subsystem. This can be useful for installing a new version of the software, accessing different default DB2 subsystems, and so on. The subsystem name and command recognition characters must be unique for each subsystem you install in your MVS system.

To install the Host Services subsystem:

1. Update or create SYS1.PARMLIB(IEFSSNxx) to contain a line with the following format:

   subsystem_name,METSSINI [,'[recognition_characters] [,procedure_name] [,svc_number]']

   where:

subsystem_name
The name of the Host Services subsystem. You can use any 4-character name that does not conflict with other subsystem names. The examples in this book assume that the subsystem name is METP. (See Worksheet H, line 3.)

METSSINI
The name of the subsystem initialization routine. MVS invokes it when you perform an IPL of the MVS system.

recognition_characters
The subsystem command recognition character or characters. You can use either one or two characters. Use the command recognition characters to precede any Host Services commands. You can choose any non-alphanumeric character, such as @ or #, for the first character if it is not already in use by another subsystem. You have the option to specify any character as the second command recognition character. The default command recognition character is an exclamation point. (See Worksheet H, line 4.)

procedure_name
The name of the cataloged procedure for the service manager address space. The default name is METSMGR. (See Worksheet H, line 9.)

svc_number
The Host Services SVC number. The default SVC number is 224. If another SVC already uses 224, substitute another number and be sure to update the SVC number in SYS1.PARMLIB(IEASVCxx). (See "Installing the SVC" and Worksheet H, line 5.)

The last three fields, if specified, must be enclosed within single quotation marks. If you omit one or more fields before the last field you want to specify, you must use commas to indicate the position of missing field values. For example, the following line uses default values for recognition_characters and procedure_name, but specifies a different svc_number:

```
METP,METSSINI,',,225'
```

The following line uses all defaults. Because the line omits all of the last three fields, the single quotation marks are not necessary:

```
METP,METSSINI
```

2. Update SYS1.PARMLIB(IEASYSxx) to point to the new or updated IEFSSNxx member.

Installing the SVC

Host Services uses a type-3 supervisor call (SVC) to perform all of its authorized functions. Isolation of authorized functions to the SVC lets the application modules run without APF authorization. The SVC source code is available in MET.SAMPLIB for your inspection.

To install the SVC:

1. Update or create SYS1.PARMLIB(IEASVCxx) to contain the following line:

SVCPARM svc_number,REPLACE,TYPE(3),EPNAME(METSVC)

where:

svc_number
The Host Services SVC number. The default SVC number is 224. If another SVC already uses 224, substitute another number and be sure to update the SVC number in SYS1.PARMLIB(IEFSSNXX). (See "Installing the Host Services Subsystem" on page 6 and Worksheet H, line 5.)

2. Update SYS1.PARMLIB(IEASYSxx) to point to the new or updated IEASVCxx member.

Defining Performance Groups

The sample cataloged procedures for running the service manager, SQL service address spaces for DB2 access, and CAS service address spaces specify PERFORM=200, PERFORM=201, and PERFORM=202, respectively. You can either define these performance groups in SYS1.PARMLIB(IEAIPSxx) or change the cataloged procedures to specify other performance-group numbers. While there are no definite rules to the installation performance specification (IPS) for Host Services, it is advisable to start by giving characteristics similar to first period TSO to the service manager address space and second period TSO to the service address spaces. Be sure to assign the service manager address space a higher priority (lower number) than the service address spaces.

Specifying multiple periods in the performance group for SQL services is often advisable, with later periods running at lower priority. This provides better service for short DB2 queries while preventing long-running DB2 queries from dominating the system. The default SQL exit routine provided with Host Services, METSQLX, issues a SYSEVENT after the completion of each SQL statement. Specify this exit routine (or your modified version of it) to enable proper usage of multiple periods.

Setting Up Cataloged Procedures

Host Services requires the use of four cataloged procedures that must be installed in a system PROCLIB. Defaults for these procedures are found in MET.JCL:

METSMGR	Specifies the JCL for the Host Services service manager address space.
METCAS	Specifies the JCL for a CAS service address space.
METSQS	Specifies the JCL for a Host Services SQL service address space.
METWTBLD	Specifies the JCL for running the batch WTDD builder program.

If you are not using the default naming conventions and performance groups, modify these four cataloged procedures. See Worksheet H for the information needed to customize the METSMGR cataloged procedure. See Worksheets J and K for the information needed to customize the METCAS and METSQS cataloged procedures. Copy the procedures to a procedure library that is available to the job entry subsystem (JES). To

copy the procedures, you can either use ISPF option 3.3 or modify and submit job PROCCOPY in MET.JCL. If necessary, you can change the names of these procedures to conform to standards used at your site.

Host Services starts the service manager address spaces as an MVS started task, using the procedure name specified by SYS1.PARMLIB(IEFSSNxx) (Worksheet H, line 9). Host Services starts the service address spaces as MVS started tasks, using the procedure names specified by the SQSPROC and CASPROC configuration options in MET.CONFIG(METSMGR). (See Worksheet K, line 1 and Worksheet J, line 1.) A gateway configuration can also include a specific cataloged procedure name for services started by that gateway service (Worksheet I, line 3).

Building the Connect Exit

The connect exit is called by Host Services to perform a number of functions at various times during the life of a service address space. Because much of its processing requires knowledge of the security environment at your site, you can build a connect exit routine with parameters that are specific to your site.

To build the connect exit, edit MET.SAMPLIB(METCNCTX) and set the parameters for the METCNCTX macro according to the information on Worksheet G, line 1, as follows:

1. Set the SECSYS parameter depending on the security system:

   RACF SECSYS=RACF

   ACF2 SECSYS=ACF2

   TOPSECRET SECSYS=TOPSECRET

2. Set the MAPPER parameter:

   YES If you want to use the security facility described in Appendix E, “User ID Translation Enablement” on page 55.

   NO If you are not applying the user ID to the accounting ID mapping function.

   If you specify MAPPER=YES, then you can also specify NOMATCH=FAIL or NOMATCH=PASS. If you specify NOMATCH=FAIL, then the user is not connected if a User ID is not found in the mapping table. If you specify NOMATCH=PASS, then the connect exit will attempt to use the unmapped User ID for password validation.

3. Edit MET.JCL(UEXIT). Verify that the assemble and link-edit steps in the ASSEMLINK procedure are correct for your system. Uncomment the line that executes ASSEMLINK for the METCNCTX program and submit the job.

   The link-edit step puts the METCNCTX module into the MET.LPALIB library. Ensure that the module is copied to the correct link pack area library before you IPL your system with the CLPA parameter.

METCNCTX is recommended for any system that uses RACF. It is also recommended for any other security package that uses the following functions to validate user IDs and passwords and then sets the security environment accordingly:

```
RACROUTE  REQUEST=VERIFY, ENVIR=DELETE
RACROUTE  REQUEST=VERIFY, ENVIR=CREATE
```

You can use METCNCTX for both CA-ACF2 and CA-TOPSECRET as well as RACF.

Each service address space calls the connect exit under the following conditions:

- During service address space initialization
- When a user tries to connect to a service (ENVIR=CREATE)
- When a user disconnects from a service (ENVIR=DELETE)
- During service address space termination
- For a change password request

Chapter 3. Configuring Host-to-LAN Communications

This chapter describes configuring PU 2.1 communications for IDS on the MVS host side of the host-to-LAN connection. To configure communications on the host, the VTAM specialist must perform the following tasks:

Create the VTAM logon-mode table entry

Define a set of APPLIDs for IDS Host Services

Define Communications Manager/2 to the Network Control Program (NCP)

Define Communications Manager/2 to VTAM

The VTAM that owns the Host Services application is not necessarily the same VTAM that owns the Communications Manager/2 used by the database gateway service. If there are two or more VTAMs involved, then you must also provide cross-domain definitions that allow these VTAMs to communicate with each other.

This chapter introduces several sample configurations that are included on the IDS MVS Host Services distribution tape. In using these sample configurations to configure communications on the host, you must:

Review and modify the sample configurations as required for your site. Make your modifications according to entries you made earlier in the Network Planning worksheets that you completed during the configuration planning process described in *Planning MVS Host-to-LAN Connectivity*. You will need the following worksheets:

- Worksheet A: Host Network Administration. Assembles information used on the MVS host running IDS software. You need one completed worksheet for each IDS Host Services system you intend to install and configure.
- Worksheet B: Host Network Administration. Assembles information used on the host that owns Communications Manager/2. You need one completed worksheet for the host system that will own the Communications Manager/2 used by the database gateway service. If just one VTAM is involved in the session, use information from Worksheet A; if two VTAMs are involved in the session, you will need to use information from both Worksheet A and Worksheet B.
- Worksheet C: Host Network Administration. Assembles information used on the MVS host running IDS software. You need one completed worksheet for each IDS gateway connected to the host.

Coordinate all changes with the LAN administrator who is responsible for configuring Communications Manager/2 for the data access services on the IDS LAN.

Creating the VTAM Logon-Mode Table Entry

Logon-mode table entries define the set of SNA session parameters used in an SNA session. If two VTAMs are involved in the session, then the log mode table entries should be defined in the same way on both VTAMs. In other words, the log mode table

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entries should be defined in the same way on the VTAM that owns IDS Host Services as well as the VTAM that owns the Communications Manager/2 LU.

To configure your site's existing logon-mode table or create a new one:

1. Add an entry to one of your site's logon-mode tables or create a new logon-mode table in the following format:

```
met_logon_mode      MODEENT      LOGMODE=met_logon_mode,                X
                     FMPROF=X'13',       FM profile 19 for LU 6.2      X
                     TSPROF=X' 7',       TS profile 7 for LU 6.2       X
                    PSNDPAC=X' 8',       primary  pacing                 X
                     PRIPROT=X'B ',      primary NAU protocol            X
                     SECPROT=X'B ',      secondary NAU protocol          X
                     COMPROT=X'78A5',    common NAU protocol               X
                     SSNDPAC=X' 8',      secondary SND pacing            X
                    PSERVIC=X' 6 2           12 C  ',              X
                     RUSIZES=X'8989'     8 X 2  9 = 4 96
```

   where:

   met_logon_mode
   The name of the IDS logon-mode table entry. Use the logon-mode table entry name from Worksheet A (and B, if a second VTAM is involved), line 3. The recommended name is METMODE. If a second VTAM is involved, the logon-mode table entry name must be identical for both VTAMs.

   MET.SAMPLIB(MODETAB), shown in Figure 1, provides a sample logon-mode table with one entry.

```
METMODET MODETAB
METMODE  MODEENT LOGMODE=METMODE,                                  X
                 FMPROF=X'13',          FM PROFILE 19 FOR LU 6.2 X
                 TSPROF=X'07',          TS PROFILE 7 FOR LU 6.2  X
                 PSNDPAC=X'08'          PRIMARY PACING ENABLED   X
                 PRIPROT=X'B0',         PRIMARY NAU PROTOCOL     X
                 SECPROT=X'B0',         SECONDARY NAU PROTOCOL   X
                 COMPROT=X'78A5',       COMMON NAU PROTOCOL      X
                 SSNDPAC=X'08',         SECONDARY SND PACING     X
                 PSERVIC=X'060200000000000000120C00',            X
                 RUSIZES=X'8989'        8 X 2**9 = 4096
         MODEEND
```

Figure 1. Sample logon-mode table

2. Assemble the logon-mode table and link-edit it into SYS1.VTAMLIB using the procedures established for your site.

Defining a Set of APPLIDs for IDS Host Services

To define a set of application IDs for Host Services, add required major node definitions to SYS1.VTAMLST, and add the member names of the major node definitions to the list of automatically activated nodes in SYS1.VTAMLST(ATCCONxx):

1. Define application IDs for use by IDS Host Services.

   Host Services requires two APPL definition statements for use by the tasks within the service manager address space; and it requires one APPL definition statement for each service address space. All of these APPL definition statements should be minor nodes under a single major node within SYS1.VTAMLST.

   Each APPL definition statement must have the following format:

```
application_id   APPL   ACBNAME=application_id,                        X
                          APPC=YES,                                        X
                          MODETAB=mode_table_name,                          X
                          DLOGMOD=met_logon_mode,                            X
                           DSESLIM=2,    maximum sessions per partner      X
                           DMINWNL= ,local contention winners              X
                           DMINWNR= , remote contention winners             X
                          VPACING=8
```

   where:

   application_id
   A VTAM minor-node name, to be used by Host Services.

   For the host-to-gateway application ID, use the entry from Worksheet A, line 4. The recommended name in the sample statement is METPHTG.

   For the gateway-to-host application ID, use the entry from Worksheet A, line 5. The recommended name in the sample statement is METPGTH.

   For the service address space application IDs, use the names generated from Worksheet C, lines 3 and 4. Sample names are METGWA01, METGWA02, and so on.

   mode_table_name
   The name of the logon-mode table. Use the logon-mode table name from Worksheet A, line 2. The recommended name in the sample statement is METMODET.

   met_logon_mode
   The name of the logon-mode table entry. Use the logon-mode table entry name from Worksheet A, line 3. The recommended name in the sample statement is METMODE.

   The sample application ID member, MET.SAMPLIB(APPLIDS), shown in Figure 2 on page 14, Figure 3 on page 15, and Figure 4 on page 16, demonstrates the application IDs necessary for Host Services to support two gateways, with each gateway configured for eight service address spaces. The SQL gateway for DB2 access is GWA; the CAS gateway is GWB.

The service manager address space requires just one set of application IDs, regardless of the number of gateways supported. However, you must define a separate set of application IDs for each gateway's associated service address spaces.

```
************************************************************************
*   THIS TABLE DEFINES THE VTAM MAJOR NODE USED BY DIS HOST SERVICES   *
*   FOR ITS CONVERSATIONS WITH THE VARIOUS GATEWAYS IT SUPPORTS        *
************************************************************************
*
A01METP VBUILD  TYPE=APPL
*
************************************************************************
*   THE FOLLOWING APPLID DEFINITIONS ARE FOR THE TASKS IN THE          *
*   DIS HOST SERVICES SERVICE MANAGER ADDRESS SPACE.                   *
************************************************************************
*
METPGTH APPL  ACBNAME=METPGTH,    APPLID FOR SERVICE MANAGER TASK      X
               APPC=YES,          OF HOST SERVICES                    X
               MODETAB=METMODET,                                       X
               DLOGMOD=METMODE,                                        X
               DSESLIM=2,                                              X
               DMINWNL=0,                                              X
               DMINWNR=0,                                              X
               VPACING=8
METPHTG APPL  ACBNAME=METPHTG,    APPLID FOR MONITOR TASK              X
               APPC=YES,          OF DIS HOST SERVICES                X
               MODETAB=METMODET,                                       X
```

Figure 2. (1 of 3) Sample application ID member APPLIDs

```
METPHTG APPL  ACBNAME=METPHTG,    APPLID FOR MONITOR TASK             X
               APPC=YES,          OF DIS HOST SERVICES               X
               MODETAB=METMODET,                                      X
               DLOGMOD=METMODE,                                       X
               DSESLIM=2,                                             X
               DMINWNL=0,                                             X
               DMINWNR=0,                                             X
               VPACING=8
*
*********************************************************************
*   THE FOLLOWING APPLID DEFINITIONS ARE FOR THE HOST SERVICES TASKS *
*   SERVING GATEWAY A.  THESE APPLIDS ARE CONFIGURED FOR             *
*   PU 2.1 SUPPORT.                                                  *
*********************************************************************
*
METGWA01 APPL  ACBNAME=METGWA01,    APPLID FOR SERVICE TASK 1 SERVING  X
               APPC=YES,            GATEWAY A                          X
               MODETAB=METMODET,                                       X
               DLOGMOD=METMODE,                                        X
               DSESLIM=2,                                              X
               DMINWNL=0,                                              X
               DMINWNR=0,                                              X
               VPACING=8

. . .
METGWA08 APPL  ACBNAME=METGWA08,    APPLID FOR SERVICE TASK 8 SERVING  X
               APPC=YES,            GATEWAY A                          X
               MODETAB=METMODET,                                       X
               DLOGMOD=METMODE,                                        X
               DSESLIM=2,                                              X
               DMINWNL=0,                                              X
               DMINWNR=0,                                              X
               VPACING=8
```

Figure 3. (2 of 3) Sample application ID member APPLIDs

```
*********************************************************************
*   THE FOLLOWING APPLID DEFINITIONS ARE FOR THE HOST SERVICES TASKS *
*   SERVING GATEWAY B. THESE APPLIDS ARE CONFIGURED FOR PU 2.1      *
*   SUPPORT.                                                         *
*********************************************************************
*
METGWB01 APPL ACBNAME=METGWB01,    APPLID FOR SERVICE TASK 1 SERVING X
               APPC=YES,            GATEWAY B                        X
               MODETAB=METMODET,                                     X
               DLOGMOD=METMODE,                                      X
               DSESLIM=2,                                            X
               DMINWNL=0,                                            X
               DMINWNR=0,                                            X
               VPACING=8
. . .
METGWB08 APPL  ACBNAME=METGWB08,    APPLID FOR SERVICE TASK 8 SERVING  X
               APPC=YES,            GATEWAY B                        X
               MODETAB=METMODET,                                     X
               DLOGMOD=METMODE,                                      X
               DSESLIM=2,                                            X
               DMINWNL=0,                                            X
               DMINWNR=0,                                            X
               VPACING=8
```

Figure 4. (3 of 3) Sample application ID member APPLIDs

2. Add a major node definition to SYS1.VTAMLST for each Communications Manager/2 that is attached to a host. Sample member MET.SAMPLIB(TR21VTAM) demonstrates the major node definitions for token-ring connections. Figure 5 and Figure 6 on page 17 list TR21VTAM.

```
*********************************************************************
*   THIS IS A SAMPLE OF THE MAJOR NODE DEFINITION THAT MUST BE       *
*   PLACED INTO ©SYS1.VTAMLST© TO DEFINE THE TOKEN-RING ATTACHED     *
*   PU 2.1 COMMUNICATIONS MANAGER RESOURCES TO VTAM.                 *
*********************************************************************
*
A01TR   VBUILD MAXGRP=5,                                             X
               MAXNO=12,                                             X
               TYPE=SWNET
*
```

Figure 5. (1 of 2) Sample member TR21VTAM

```
*
PUGWA   PU     ADDR=C1,            STATION ADDRESS                     X
               IDBLK=05D,          PC ON A SWITCHED NETWORK            X
               IDNUM=36180,        SERIAL NUMBER OF PC                 X
               DISCNT=NO,          DISCONNECT = NO                     X
               MAXOUT=1,                                               X
               MODETAB=METMODET,   USE DIS HOST SERVICE'S MODE TABLE   X
               DLOGMOD=METMODE,    DIS MODE                            X
               MAXPATH=1,                                              X
               VPACING=2,                                              X
               PUTYPE=2,                                               X
               ISTATUS=ACTIVE      INITIAL STATUS OF PU
*
LUGWA00 LU     LOCADDR=00,ISTATUS=ACTIVE
*
*
PUGWB   PU     ADDR=C1,            STATION ADDRESS                     X
               IDBLK=05D,          PC ON A SWITCHED NETWORK            X
               IDNUM=36181,        SERIAL NUMBER OF PC                 X
               DISCNT=NO,          DISCONNECT = NO                     X
               MAXOUT=1,                                               X
               MODETAB=METMODET,   USE DIS HOST SERVICE'S MODE TABLE   X
               DLOGMOD=METMODE,    DIS MODE                            X
               MAXPATH=1,                                              X
               VPACING=2,                                              X
               PUTYPE=2,                                               X
               ISTATUS=ACTIVE      INITIAL STATUS OF PU
*
LUGWB00 LU     LOCADDR=00,ISTATUS=ACTIVE
```

Figure 6. (2 of 2) Sample member TR21VTAM

3. Add the member names of the major node definitions to the list of automatically activated nodes in SYS1.VTAMLST(ATCCONxx). The two members can belong to different VTAMs.
4. If Host Services and Communications Manager/2 are in different domains, verify that the two VTAMs can communicate with each other.

Defining Communications Manager/2 to NCP

Table 2 on page 18 lists sample members for definitions of SDLC and token-ring connections. Specifics of each definition depend on the type of connection and the type of communications controller used. These sample members are for NCP Version 4 Release 3 on a Model 3725 communications controller.

To define Communications Manager/2 to the NCP:

Table 2. Sample NCP definitions for SDLC and token-ring connections

Connection type	Member name	Listing is shown in
SDLC	MET.SAMPLIB(SDLC21)	Figure 7 on page 18
Token ring	MET.SAMPLIB(TOKRING)	Figure 9 on page 20

1. If you are connecting Communications Manager/2 to the host system through an SDLC connection, define each SDLC-connected Communications Manager/2 to the NCP.

   Figure 7 shows a sample member, MET.SAMPLIB(SDLC21), that demonstrates this type of definition and shows the PU and LU statements required for defining Communications Manager/2 for a single gateway to the NCP. The BUILD statement requires the AUXADDR and NAMTAB parameters, and the PU statement requires XID=YES.

```
NCPBUILD BUILD BFRS=128,           NCP buffer size                     X
               AUXADDR=50,         Net addr pool for independent LUs   X
               CA=(TYPE5,TYPE5),   Installed channel adapter type      X
               CSMHDR=27F5C711C3F0405C40C8C4D9405C,   3270 CRITSIT HDR X
               CSMHDRC=40E3C5E7E3405C5C,   3270 CRITST HEADER XTRA TXT X
               CSMSG=C3D9C9E3E2C9E35A40E385819440F040,    CRITSIT MESG X
               CSMSGC=6040C1D5E240828587A4954B,   CRITSIT MSG XTRA TXT X
               DELAY=(0.2),        Channel attention delay             X
               DSABLTO=11.5,       Modem data set ready time-out       X
               ENABLTO=11.5,       Data set ready time out - 11.5 sec  X
               LOADLIB=LOADLIB,    (V) VTAM -- ddname of NCP load mod  X
               MAXSSCP=1,          1 SSCP can activate this NCP        X
               MODEL=3725,         NCP is for a 3725 comm controller   X
               NAMTAB=50,          For PU type 2.1 devices             X
               NCPCA=(ACTIVE,INACTIVE),   Channel adapter 0 active     X
               NETID=yournet,      NETWORK ID - required for V4.3      X
               NEWNAME=NCP001,     Name of this load module            X
```

Figure 7. (1 of 2) Sample NCP generation entries for SDLC connection

```
                NEWNAME=NCP001,     Name of this load module            X
                SUBAREA=07,         NCP subarea address = 07            X
                TIMEOUT=(120),      Response to attn time-out = 2 min.  X
                TYPGEN=NCP,         NCP only                            X
                TYPSYS=MVS,         MVS/ESA                             X
                VERSION=V4R3        ACF/NCP Version 4 Release 3
*
GS21      GROUP LNCTL=SDLC,         Synchronous Data Link               X
                ANS=CONTINUE,       Don't break cross domain sessions   X
                CLOCKNG=EXT,        Modem provides clocking             X
                DUPLEX=FULL,        Request to send always up           X
                PUTYPE=2,           PU type 2                           X
                REPLYTO=1,          1 second for SDLC                   X
                RETRIES=(7,4,5),    7 retry pause 4 seconds 5 times     X
                TYPE=NCP,           NCP only                            X
                VPACING=2           (V) VTAM
*
SDLC002   LINE  ADDRESS=(002),      Transmit & Receive addrs            X
                ISTATUS=ACTIVE,     (V) VTAM                            X
                ETRATIO=30,         Error-to-transmission ratio=3%      X
                NEWSYNC=NO,         Non-IBM modems                      X
                NRZI=NO,            For a non-IBM modem                 X
                SERVLIM=10,         10 SOT entries per service seek     X
                SRT=(4000,64),      Trans thresh=4000,error retries=64  X
                SPEED=(19200)       Line speed is 19200 BPS
*
A02PU     PU    ADDR=C2,            Cluster address = C2                X
                VPACING=0,          Pacing set by BIND image            X
                PASSLIM=8,          Up to 8 PIU's sent to PU at 1 time  X
                DISCNT=(NO),        (V) VTAM                            X
                MODETAB=METMODET,   (V) Logon mode table name           X
                DLOGMOD=METMODE,    (V) log mode table entry           X
                SSCPFM=USSSCS,      (V) VTAM                            X
                XID=YES             For PU 2.1 Communications Manager/2
*
LPOOL LUDRPOOL NUMILU=32            Number of independent LUs
*
A02LU00 LU      LOCADDR=0,          Independent LU                      X
                RESSCB=64           Number of sessions LU can conduct
*
```

Figure 8. (2 of 2) Sample NCP generation entries for SDLC connection

2. If you are connecting Communications Manager/2 to the MVS host through a new token-ring network, define that network to the NCP.

Figure 9 on page 20 shows a sample member, MET.SAMPLIB(TOKRING), that demonstrates this type of definition and shows the PU and LU statements required for defining Communications Manager/2 for a single gateway to the NCP.

```
         OPTIONS NEWDEFN=YES
NCPBUILD BUILD BFRS=128,           NCP buffer size                    X
               AUXADDR=50,         Net addr pool for independent LUs  X
               CA=(TYPE5,TYPE5),   Installed channel adapter type     X
               CSMHDR=27F5C711C3F0405C40C8C4D9405C,   3270 CRITSIT HDR X
               CSMHDRC=40E3C5E7E3405C5C,   3270 CRITST HEADER XTRA TXT X
               CSMSG=C3D9C9E3E2C9E35A40E385819440F040,    CRITSIT MESG X
               CSMSGC=6040C1D5E240828587A4954B,   CRITSIT MSG XTRA TXT X
               DELAY=(0.2),        Channel attention delay            X
               DSABLTO=11.5,       Modem data set ready time-out      X
               ENABLTO=11.5,       Data set ready time out - 11.5 sec X
               LOADLIB=ddname,     (V) VTAM -- ddname of NCP load mod X
               MAXSSCP=1,          1 SSCP can activate this NCP       X
               MXRLINE=1,          Number of TICS                     X
               MXVLINE=10,         No. of logical token-ring connect'nsX
               MODEL=3725,         NCP is for a 3725 comm controller  X
               NAMTAB=50,          For PU type 2.1 devices            X
               NCPCA=(ACTIVE,INACTIVE),   Channel adapter 0 active    X
               NETID=yournet,      NETWORK ID - required for V4.3     X
               NEWNAME=NCP001,     Name of NCP load module            X
               SUBAREA=02,         NCP subarea address = 02           X
               TIMEOUT=(120),      Response to attn time-out = 2 min. X
               TYPGEN=NCP,         NCP only                           X
               TYPSYS=MVS,         MVS/ESA                            X
               VERSION=V4R3        ACF/NCP Version 4 Release 3
*
*********************************************************************
*        SPECIFICATION FOR TOKEN RING LAN                           *
*********************************************************************
*
TRG1P001 GROUP ECLTYPE=PHYSICAL
*
TRL1P001 LINE ADDRESS=(080,FULL),  TIC position in 3725 chasis        X
              PORTADD=0,           Physical line ID number           X
              LOCADD=400037250000, Locally administered addr of TIC  X
              RCVBUFC=4095,        NTRI receive buffer capacity      X
              MAXTSL=2044          NTRI transmit buffer capacity
*
```

Figure 9. (1 of 2) Sample NCP generation entries for token-ring connection

```
*
LPOOL LUDRPOOL NUMILU=32           Number of independent LUs
*
LU060    LU    ISTATUS=ACTIVE,                                      X
               LOCADDR=0,                                           X
               RESSCB=64
*
TRG1L001 GROUP ECLTYPE=LOGICAL,    Generates 10 logical lines/pus    X
               AUTOGEN=10,         Generates 10 logical lines/pus    X
               CALL=INOUT,         Allows dial in and dial out       X
               PHYPORT=0           Points to TIC PORTADDR in line def
```

Figure 10. (2 of 2) Sample NCP generation entries for token-ring connection

3. Reassemble, link, and edit your NCP source code and ensure that VTAM is updated with the new NCP major-node definition from this NCP generation.

Defining Communications Manager/2 to VTAM Using 3174

Define Communications Manager/2 to VTAM for each gateway that is to connect to a 3174 communications controller. Figure 11 demonstrates such a definition.

The sample VTAM major-node definition shown here is for a 3174 connection between the host and Communications Manager/2:

```
         VBUILD TYPE=CA
* THE MAXBFRU PARAMETER BELOW MUST BE CALCULATED SEPARATELY FOR EACH
* SITE.  MAXBFRU=  (29 + MAX RU SIZE)/IOBUF WHERE IOBUF IS THE SIZE OF
* VTAM'S I/O BUFFERS AS SPECIFIED IN THE VTAM START LIST, ATCSTRXX
A03PU    PU    CUADDR=501,               ** CONTROLLER SUBCHANNEL ADDR*X
               MODETAB=METMODET          ** LOGON MODE TABLE         **X
               PUTYPE=2,                 ** PU TYPE 2                **X
               SECNET=YES,               ** ROUTE NOT DEFINED TO VTAM**X
               MAXBFRU=N                 **                          **
* DATABASE GATEWAY LU DEFINITION
A03LU00 LU    LOCADDR=00
```

Figure 11. Sample VTAM major-node definition for a 3174 connection

Chapter 4. Configuring Host Services

This chapter describes configuration of IDS Host Services software on a host system running the MVS/ESA operating system. Configuring Host Services involves the following tasks:

- Editing the control configuration member, MET.CONFIG(METCNTRL)
- Editing the database and CAS gateway configuration members
- Specifying three user exits

After you complete the configuration, you must perform an IPL on the MVS system. After the IPL successfully completes, you can begin operation of the MVS host with Host Services.

Be sure that you have the following worksheets:

- Worksheet A: Host Network Administration. Assembles information used on the MVS host running IDS software. You need one completed worksheet for each IDS Host Services system you intend to install and configure.
- Worksheet H: MVS Systems Programming (General Information). Assembles general information used on the MVS host running IDS Host Services. You need one completed worksheet for each MVS host system on which you intend to install Host Services.
- Worksheet I: MVS Systems Programming (for IDS software). Assembles gateway information used on the MVS host running IDS Host Services. You need one completed worksheet for each gateway (DB2 or CAS) that will communicate with the host system. An IDS OS/2 database gateway service can be configured to run multiple gateways.
- Worksheet L: DB2 Administration. Assembles global information used on the MVS host running DB2. You need one completed worksheet for each MVS host system running DB2 subsystems that you want to access.

The distribution tape includes a variety of sample configuration files that you can modify for your configuration. You will probably have to make some changes in these files to match your site's specific requirements, but in some cases you can use them directly. The sample files carry several assumptions about names and quantities:

- The sample configuration is for one DB2 gateway and one CAS gateway.
- The sample DB2 gateway identifier is GWA; the sample CAS gateway identifier is GWB.
- Each gateway requires that eight service address spaces be configured. You need one service address space for each simultaneous desktop tool user that you want to allow.
- The IDS database administrator's user ID is METDBA.
- The DB2 subsystem name is DSN.

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The prefix for the DB2 DSNLOAD data set name is DSN310.

Editing the Control Member

The sample control configuration member, MET.CONFIG(METCNTRL), specifies the default values for all of the service manager address space's configuration parameters, as shown in Figure 12 on page 24. (Appendix B, “Configuration Parameter Reference” on page 43 describes configuration parameters in detail.) METCNTRL also specifies two gateway configuration members. Use Worksheet H as an aid to editing METCNTRL.

METCNTRL is adequate for initial testing, without any editing, under the following conditions:

- Communications Manager/2 is configured for each gateway with VTAM LU names and logon mode corresponding to those shown in METCNTRL, GWASQS, and GWBCAS.
- The default values given in Chapter 1, “Installing Host Services” on page 1, Chapter 2, “Configuring MVS for Host Services” on page 5, and Chapter 3, “Configuring Host-to-LAN Communications” on page 11 are used.

```
/*                                                                  */
/*              SUBSYSTEM RELATED OPTIONS                           */
/*                                                                  */
/*   NOTE:  STATISTICS ON ECSA UTILIZATION ARE REPORTED BY THE      */
/*          INTERVAL STATUS REPORT.  YOU CAN USE THESE NUMBERS TO   */
/*          DETERMINE OPTIMAL VALUES FOR LOGPOOL, MAXECSA, OPERPOOL,*/
/*          SRBPOOL, AND TANPOOL.                                   */
/*                                                                  */
LOGPOOL         5   5          /* 1 PER CROSS MEMORY MESSAGE       */
MAXECSA         50             /* LIMIT ECSA TO 50K BYTES          */
OPERPOOL        2   2          /* 1 PER OPERATOR COMMAND IN PROCESS*/
SRBPOOL         10  10         /* 1 PER CROSS MEMORY FUNCTION SCHED*/
SVC-CALLER-VERIFICATION OFF    /* VERIFY SVC CALLER'S ADDRESS SPACE? */
TANPOOL         8   8          /* 1 PER CROSS MEMORY FUNCTION REQUEST*/
/*                                                                  */
/*              SERVICE MANAGER ADDRESS SPACE VTAM RELATED OPTIONS  */
/*                                                                  */
APPLID-FOR-GTH  METPGTH        /* GATEWAY TO HOST                  */
APPLID-FOR-HTG  METPHTG        /* HOST TO GATEWAY                  */
LOGMODE         METMODE        /* LOGMODE ENTRY                    */
/*                                                                  */
/*              GENERAL ADDRESS SPACE RELATED OPTIONS               */
/*                                                                  */
ATTACHINTERVAL  30             /* SECONDS TO WAIT FOR SUBTASK TO ATTA*/
CONLEVEL        W              /* DISPLAY CONSOLE MESSAGES >= WARNING*/
CONNECTEXIT     METCNCTX       /* CONNECT EXIT ROUTINE NAME        */
HOST-CODE-PAGE  037            /* U.S. EBCDIC CODE PAGE            */
INTERNALTRACE   0              /* NUMBER OF INTERNAL TRACE BUFFERS */
LOGLEVEL        I              /* DISPLAY LOG MESSAGES >= INFORMATION*/
MAXSERVICES     0              /* 0 = DON'T RESTRICT NUMBER OF SVCS*/
MESSAGE-CASE    MIXED          /* PRINT MESSAGES IN MIXED CASE     */
REQUIRE-DPF     NO             /* REQUIRE DESKTOP PASSWORD FACILITY? */
ROUTCDE         2              /* ROUTCDE FOR OPERATOR CONSOLE MSGS*/
STATUSEXIT      NONE           /* USE DEFAULT INTERVAL STATUS REPORT */
STATUSINTERVAL  900            /* ISSUE STATUS REPORT EVERY 900 SEC. */
TRACE-CLASS     A              /* SYSOUT CLASS FOR HOST TRACES     */
/*                                                                  */
```

Figure 12. (1 of 2) Sample member MET.CONFIG(METCNTRL)

```
/*              SQL SERVICE RELATED OPTIONS                          */
/*                                                                   */
SQSMEM          100             /* KBYTES OF DYNAMIC STORAGE        */
SQSPROC         METSQS          /* NAME OF SQL SERVICE PROCEDURE    */
SQLEXIT         METSQLX         /* SQL EXIT ROUTINE NAME            */
/*                                                                   */
/*              DB2 RELATED OPTIONS                                  */
/*                                                                   */
DB2PLAN         DSN METPLAN     /* ROOT FOR GENERATING DB2 PLAN NAMES */
DB2SS           DSN             /* DEFAULT DB2 SUBSYSTEM NAME       */
DEGREE-ANY      NO              /* DON'T USE SET CURRENT DEGREE=ANY */
PERM-CONNECT    NO              /* DON'T ESTABLISH PERM. DB2 CONNECTS */
THREAD          CONNECT         /* DB2 THREAD CREATION CONTROL      */
/*                                                                   */
/*              COOPERATIVE APPLICATION SERVICE RELATED OPTIONS      */
/*                                                                   */
CASMEM          100             /* KBYTES OF DYNAMIC STORAGE        */
CASPROC         METCAS          /* NAME OF CAS SVC PROCEDURE        */
/*                                                                   */
/*              GATEWAYS                                             */
/*                                                                   */
GATEWAY         GWASQS          /* DATABASE GATEWAY                 */
GATEWAY         GWBCAS          /* CAS GATEWAY                      */
```

Figure 13. (2 of 2) Sample member MET.CONFIG(METCNTRL)

Some parameters are critical to successful configuration. The following parameters are related to the service address spaces:

CONNECTEXIT

DB2PLAN

DB2SS

CASPROC

SQSPROC

The VTAM-related options APPLID-FOR-xxx and LOGMODE and the GATEWAY statements at the end of the member are also critical to achieving a successful configuration. Most of the other parameters are related to performance tuning; you can adjust them as needed after you have some experience using IDS.

Each APPLID-FOR-xxx name in MET.CONFIG(METCNTRL) shown on Figure 12 on page 24 is listed in Table 3 on page 26 with a description and the corresponding prefix for its transaction program name. The TP prefix must be suffixed by the gateway identifier, for example, XAGTHGWA.

Table 3. Local APPLID names

Name	Purpose	TP Prefix
METPGTH	Start commands sent by gateway for host services	XAGTH
METPHTG	Host responses to gateway when host services are started	XAHTG

The APPLID names listed in Table 3 can be changed to follow the naming conventions of your site. However, the TP prefixes and suffixes must be used as specified here.

General Address Space-Related Parameters

The CONNECTEXIT parameter specifies the routine to be run when a desktop user wants to connect to the MVS host. The routine authenticates the user's authorization ID and password. For DB2 only, it then makes that ID accessible to DSN3@ATH, the DB2 authorization exit routine. You can either leave the default name (METCNCTX) in place or specify the name of your own routine. (See Worksheet H, line 12.)

You can modify this exit routine to record information through the system management facilities (SMF) whenever a user connects through Host Services. METCNCTX is suitable for any system that has a security package (such as RACF) that uses the following function:

```
RACROUTE  REQUEST=VERIFY, ENVIR=CREATE
```

This function authenticates a specified user ID and password and creates the security environment for that user.

See the source code in MET.SAMPLIB and MET.MACLIB for details.

SQL Service-Related Parameters

The SQSPROC parameter specifies the name of the cataloged procedure that the service manager task uses to start an SQL (DB2) service address space. You can also apply the SQSPROC parameter in a gateway configuration member to specify a different procedure for the service address spaces associated with a specific DB2 gateway. (See Worksheet I, line 3.)

The DB2PLAN parameter specifies a default prefix, from one to seven characters long, for Host Services application plan names. Two application plans are required:

One plan with the isolation level specified as “repeatable read,” used during transaction processing (statements bracketed by BEGIN TRANSACTION and END TRANSACTION commands)

One plan with the isolation level specified as “cursor stability,” used for all other processing

SQL routines append C or R to the plan-name prefix to generate the full plan name. The default prefix is METPLAN. You can specify a different plan-name prefix for each

DB2 subsystem. You must enter a DB2PLAN parameter for each DB2 subsystem that will be accessed by IDS. (See Worksheet L, line 5.)

The *DB2SS* parameter specifies the default DB2 subsystem name that the DB2 gateways are to use when a user connects to DB2 and either:

- does not explicitly specify a DB2 subsystem name
- uses a desktop tool that has DBS specified in the **Database Name** field of its Icon Options window

The default DB2SS value is DSN. (See Worksheet L, line 1.)

VTAM-Related Parameters

The APPLID-FOR-xxx values must correspond to the VTAM APPLIDs specified through the APPL macro in the VTAM node definitions for Host Services. For example, if you use the names that are in the sample application ID member APPLIDS, the APPLID-FOR-xxx values would be:

```
APPLID-FOR-GTH:     METPGTH
APPLID-FOR-HTG:     METPHTG
```

The value for LOGMODE must be the name specified on the MODEENT macro that you specified in the logon-mode table during VTAM configuration. (See Worksheet A, lines 3, 4, and 5.)

Each GATEWAY statement specifies a gateway configuration member to be read from the CONFIG library for automatic enabling of communications between a gateway and the associated service address spaces. Be sure that METCNTRL includes one such statement for each gateway. The name shown in the GATEWAY statement specifies the member to be read from the CONFIG library.

Embedded Host Services Commands

You can include Host Services commands in your control member. The system executes these commands when the service manager address space is initialized through a cold start. The commands are not issued during a hot start. *Administering Host Services for MVS: DB2 and Cooperative Application Services* describes the syntax of all Host Services commands for the MVS environment. You must precede each included command with an exclamation mark (!), even though your configuration specifies a different command recognition character or characters.

Defining a Gateway to Host Services

You must create one gateway configuration member for each gateway that is to communicate with the service manager address space. You can type the gateway configuration member name in a GATEWAY statement in METCNTRL. Host Services uses the GATEWAY statements to automatically enable its communications with the corresponding gateways.

You are not required to specify the gateway configuration member names in the control member. If you prefer, you can use the command !START to enable communications to each gateway individually, as you are ready to bring the gateway on line. See *Administering Host Services for MVS: DB2 and Cooperative Application Services* for more information about using the !START command.

Two sample gateway configuration members are provided in MET.CONFIG: GWASQS and GWBCAS (see Figure 14 and Figure 15 on page 29). They provide IDS configuration information that corresponds to the sample VTAM configurations for a DB2 gateway and a CAS gateway.

```
GATEWAY-TYPE: SQS          /* GATEWAY TYPE IS SQL SERVICES             */
GATEWAY-ID: GWA            /* GATEWAY ID FOR THIS GATEWAY              */
CPREFIX:    SQ             /* SERVICE TRANS. PROGRAM NAME PREFIX       */

/*                                 REMOTE LU   PU TYPE                 */
PARTNER-LU-FOR-GTH:                  LUGWA00    PU2.1
PARTNER-LU-FOR-HTG:                  LUGWA00    PU2.1

SERVICE LU(S):       /*   APPL ID   REMOTE LU   PU TYPE                 */
                          METGWA01    LUGWA00    PU2.1   /* SERVICE 1  */
                          METGWA02    LUGWA00    PU2.1   /* SERVICE 2  */
                          METGWA03    LUGWA00    PU2.1   /* SERVICE 3  */
                          METGWA04    LUGWA00    PU2.1   /* SERVICE 4  */
                          METGWA05    LUGWA00    PU2.1   /* SERVICE 5  */
                          METGWA06    LUGWA00    PU2.1   /* SERVICE 6  */
                          METGWA07    LUGWA00    PU2.1   /* SERVICE 7  */
                          METGWA08    LUGWA00    PU2.1   /* SERVICE 8  */
```

Figure 14. Sample gateway configuration member MET.CONFIG(GWASQS)

```
GATEWAY-TYPE: CAS          /* GATEWAY TYPE IS CAS                     */
GATEWAY-ID: GWB            /* GATEWAY ID FOR THIS GATEWAY             */
CPREFIX:    CA             /* SERVICE TRANS. PROGRAM NAME PREFIX      */

/*                                 REMOTE LU   PU TYPE                */
PARTNER-LU-FOR-GTH:                  LUGWB00    PU2.1
PARTNER-LU-FOR-HTG:                  LUGWB00    PU2.1

SERVICE LU(S):       /*   APPL ID   REMOTE LU   PU TYPE                */
                          METGWB01    LUGWB00    PU2.1   /* SERVICE 1  */
                          METGWB02    LUGWB00    PU2.1   /* SERVICE 2  */
                          METGWB03    LUGWB00    PU2.1   /* SERVICE 3  */
                          METGWB04    LUGWB00    PU2.1   /* SERVICE 4  */
                          METGWB05    LUGWB00    PU2.1   /* SERVICE 5  */
                          METGWB06    LUGWB00    PU2.1   /* SERVICE 6  */
                          METGWB07    LUGWB00    PU2.1   /* SERVICE 7  */
                          METGWB08    LUGWB00    PU2.1   /* SERVICE 8  */
```

Figure 15. Sample gateway configuration member MET.CONFIG(GWBCAS)

DB2 and CAS gateways use the same remote LU name for all communication paths. The only items that distinguish DB2 gateways from CAS gateways are the GATEWAY-TYPE and CPREFIX parameters.

If the LAN uses load-balancing pools, they have no effect on host configuration or operation. From the host system's point of view, a connection made through a pool is identical to a connection made without a pool.

Specifying User Exits

Host Services supports three user exit routines. These exits are used for:

- Status reports
- SQL processing
- User validation prior to connecting to a service

The data set MET.SAMPLIB includes sample source code for these routines, written in assembler language. These sample routines use macros that are included in MET.MACLIB. As written, these exits are to be loaded above the 16-megabyte line. You must specify a connect-exit routine, but use of the status-report exit and SQL exit is optional. The job MET.JCL(UEXIT) contains sample JCL for assembling and link-editing these routines.

The sample status-report exit, MET.SAMPLIB(METSTATR), is not intended for actual use. It is provided only to show how to use the exit. The service manager address space invokes this exit routine every *n* seconds, where *n* is specified by the STATUSINTERVAL configuration parameter. In addition to performing its own proc-

essing, the exit routine tells Host Services whether to generate its status report by setting the return code. The METSTATR exit does not need to be specified as re-entrant. (See Worksheet H, line 11.)

The sample SQL exit, MET.SAMPLIB(METSQLX), can be used as distributed with the Host Services software. The exit is invoked from an SQL service address space before and after execution of each SQL statement issued from the desktop. It is also invoked after every FETCH operation. The default routine issues transaction SYSEVENTs to the MVS System Resource Monitor after the completion of each SQL statement. The SQLEXIT must be specified as re-entrant; also, it should be (but is not required to be) in the LPALIB. (See Worksheet H, line 13.)

The alternative library to LPALIB can be an authorized library defined by the LINKLST library or the STEPLIB DD statement of the service manager address space procedure. If the STEPLIB DD statement is used, all the concatenated libraries must also be authorized libraries.

The data set MET.SAMPLIB includes a sample connect-exit routine, METCNCTX. It authenticates the user ID and password, then makes the user ID accessible to DSN3@ATH, the DB2 authorization exit routine. The connect exit must be specified as re-entrant; also, it should be (but is not required to be) in the LPALIB. (See Worksheet H, line 12.) See “Building the Connect Exit” on page 9 for instructions about building METCNCTX.

The alternative library to LPALIB can be an authorized library defined by the LINKLST library or the STEPLIB DD statement of the service manager address space procedure. If the STEPLIB DD statement is used, all the concatenated libraries must also be authorized libraries.

Initiating Host Services Operation

To begin operation of the MVS host with Host Services:

1. Perform an IPL of your system according to your usual procedures.

   The following IPL message is displayed:

   IEA1 1A SPECIFY SYSTEM PARAMETERS FOR RELEASE

2. Enter the following response:

   R ,CLPA,

   Finish the response with any additional IPL parameters you might be required to enter. The *CLPA* parameter installs Host Services modules into the ELPA. Complete the IPL according to your site's instructions.

3. After VTAM has successfully completed its initialization, enter !START METSERV at the operator interface to start the service manager address space.

   If you have configured the IDS for a Host Services subsystem command recognition character other than the default, be sure to use your characters instead of the exclamation point (!).

4. Be sure that the database gateway service is properly configured and that the service and Communications Manager/2 are running and connected to the network.

   The database gateway service and Communications Manager/2 must be configured and available to the network for users to be able to issue DB2 queries or CAS requests from desktops. For DB2 queries, DB2 must also be active; for CAS requests, CAS resources must be active. Host Services can be started without these resources being available; it responds when the resources become available and it seeks access to them.

5. Host Services can be started without Communications Manager/2 being fully configured and available.

   Communications Manager must be configured and available before the database gateway service can start a conversation with the service manager address space on the MVS host. If you have not configured Communications Manager/2, see Chapter 5, “Configuring Communications Manager/2” on page 32.

   The Communications Manager/2 configured for use with a database gateway service starts conversations with the service manager address space within a couple of minutes. The gateway service then requests the service manager to start the service address spaces. After a service address space completes its initialization, it is available to the end user.

6. If you have configured a database gateway service for DB2 sessions, prepare for data access.

   Administering Databases with IDS describes data access preparations that you can implement with the IDS SA tool.

   Administering Host Services for MVS: DB2 and Cooperative Application Services describes data access preparations that you can implement through the MVS host interface.

   These preparations can be performed before Host Services has been fully configured. Preparations include:

   Configuring DB2 authorization IDs

   Creating application plans

   Creating an IDS database

   Installing a new WTDD

   Upgrading a DIS Version 1.3.*x* WTDD

   Optionally defining synonyms for users

These steps are required the first time you start IDS operations. After you complete the installation, configuration, and these steps, the Host Services software starts whenever you enter the !START METSERV command. See *Administering Host Services for MVS: DB2 and Cooperative Application Services* for information about starting, operating, and stopping Host Services.

Chapter 5. Configuring Communications Manager/2

Communications Manager/2 provides much of the communications capabilities of IDS database gateway services. It also maintains the communications connections to the host system on behalf of the gateway services. Communications Manager/2 resides on the same IDS LAN workstation as the IDS gateway services, where it uses the SNA APPC LU 6.2 protocol and is connected to the MVS host system through a LAN link or an SDLC line for remote communications.

This chapter briefly outlines the Communications Manager/2 items that you must configure to enable communications on the LAN side of the host-to-LAN connection between a host system and IDS gateway services. It is assumed that Communications Manager/2 is installed and operating, and that you are familiar with Communications Manager/2 functions. In particular, you should be familiar with the following configuration routines:

- Creating data link control (DLC) profiles
- Configuring SNA local node characteristics
- Defining SNA connections from the Communications Manager/2 workstation to a host node
- Defining SNA features such as local LUs, partner LUs, modes, and transaction programs and their attributes

Preparing to Configure Communications Manager/2

Assemble copies of the following worksheets from *Planning MVS Host-to-LAN Connectivity*:

- Worksheet A: Host Network Administration. Assembles information used on the MVS host running IDS software. You need one completed worksheet for each IDS Host Services system you intend to install and configure.
- Worksheet B: Host Network Administration. Assembles information used on the host that owns Communications Manager/2. You need one completed worksheet for the host system that will use the Communications Manager/2 used by the database gateway service.
- Worksheet C: Host Network Administration. Assembles information used on the MVS host running IDS software. You need one completed worksheet for each IDS gateway connected to the host.
- Worksheet D: LAN Administration (for Communications Manager/2 general information). Assembles information used on each workstation providing database gateway services and physically attached to the MVS host computer through Communications Manager/2 and VTAM. You need one completed worksheet for each workstation that will run an IDS database gateway service and Communications Manager/2, and will be physically attached to VTAM on the host system.

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Worksheet E: LAN Administration (for Communications Manager/2 TP names). Assembles information used for each gateway (within a database gateway service) that will access data on the MVS host system. You need one completed worksheet for each gateway.

Worksheet F: IDS Administration (for IDS system administration). Assembles information used in configuring and administering each gateway (within a database gateway service) that will access data on the MVS host system. You need one completed worksheet for each gateway.

Worksheet I: MVS Systems Programming (for IDS software). Assembles gateway information used on the MVS host running IDS Host Services. You need one completed worksheet for each gateway (DB2 or CAS) that will communicate with the host system. One IDS OS/2 database gateway service can be configured to run multiple gateways.

All of these worksheets contain source information required by Communications Manager/2 during configuration as shown in Table 4.

Table 4 (Page 1 of 2). Communications Manager/2 configuration items

Worksheet-Line	Worksheet Item Description	Where Used in Communications Manager/2 Configuration
A-1	SNA Network Name	SNA Features List: Partner LU definitions
A-3	Logon mode table entry name	Transmission Service Mode Definition
A-4	IDS service manager host-to-gateway APPLID	SNA Feature Configuration
A-5	IDS service manager gateway-to-host APPLID	SNA Feature Configuration
B-1	SNA Network Name	SNA Features List: Local LU definitions
B-3	Logon mode table entry name	Transmission Service Mode Definition
B-4	Communications Manager/2 PU name	SNA Local Node Characteristics: Local node name
B-5	RU size (smallest maximum of any node)	SNA Features List: Mode Definition: RU size
C-3	First in series of IDS services host APPL ID names	SNA Feature Configuration
C-4	Number of services	SNA Feature Configuration
D-1	PC identification number	SNA Feature Configuration
D-2	Communications Manager/2 SNA network name	SNA Local Node Characteristics: Network ID
D-3	Communications Manager/2 PU name	SNA Feature Configuration
D-4-a	Adapter number for host connection (0 or 1)	Token Ring or Other LAN Types DLC Adapter Parms: Adapter

Table 4 (Page 2 of 2). Communications Manager/2 configuration items

Worksheet-Line	Worksheet Item Description	Where Used in Communications Manager/2 Configuration
D-4-b	LAN type (Ethernet or Token-Ring)	Communications Manager Configuration Definition: Workstation Connection Type
D-4-c	HOST LAN address	Connection to a Host: LAN destination address (hex)
D-4-d	SDLC station address	SDLC DLC Adapter Parameters: Additional Parameters: Link station role parameters: Local station address (hex)
E-1	Gateway ID (alphanumeric)	SNA Feature Configuration: Transaction program definitions
E-2	TP name prefix (CA or SQ)	SNA Feature Configuration: Transaction program definitions
E-3	Communications Manager/2 LU profile name	SNA Feature Configuration
F-1	Gateway ID (alphanumeric)	SNA Feature Configuration: Transaction program definitions
F-4	LAN network name	Token Ring or Other LAN Types DLC Adapter Parms: C & SM LAN ID
I-1	Gateway ID (alphanumeric)	SNA Feature Configuration: Transaction program definitions
I-2	Gateway type (CAS or SQS)	SNA Feature Configuration: Transaction program definitions

When you upgrade a Communications Manager/2 configuration file, Communications Manager/2 usually assigns all connections for host access in a peer node. In this case, be sure to change the partner type in the connections list to the **To host** setting.

Complete configuration instructions for Communication Manager/2 are provided in *IBM Communications Manager/2 Configuration Guide* (SC31-6171). A set of worksheets for you to map configurations for Communications Manager/2 is provided in *IBM Communications Manager/2 Configuration Worksheets* (SX75-0088). You might find these worksheets a useful supplement to the planning worksheets provided in *Planning MVS Host-to-LAN Connectivity*.

After you configure Communications Manager/2, the configured database gateway service being served by the Communications Manager/2 can start a conversation with the configured service manager address space on the MVS host, if Host Services is started. To start Host Services, see “Initiating Host Services Operation” on page 30.

Sample Network Definition File (NDF)

The following sample network definition file (NDF) defines the APPC configuration for the host-to-LAN connection. Communications Manager/2 builds the NDF when you save the input to the appropriate configuration panels. This sample file profiles a PU 2.1 token-ring configuration for NCP on an IBM Model 3745 communications controller.

```
DEFINE_LOCAL_CP   FQ_CP_NAME(IBMIDS1.CP4 1A   )
                   DESCRIPTION(Created on  3- 9-94 at  3:58p)
                  CP_ALIAS(CP4 1A    )
                  NAU_ADDRESS(INDEPENDENT_LU)
                  NODE_TYPE(EN)
                  NODE_ID(X' 4 1A')
                  HOST_FP_SUPPORT(YES)
                  HOST_FP_LINK_NAME(LINK   1);

DEFINE_LOGICAL_LINK   LINK_NAME(LINK   1)
                  FQ_ADJACENT_CP_NAME(IBMIDS1.CP     2)
                  ADJACENT_NODE_TYPE(LEN)
                  DLC_NAME(IBMTRNET)
                  ADAPTER_NUMBER( )
                  DESTINATION_ADDRESS(X'4    9453  1')
                  CP_CP_SESSION_SUPPORT(NO)
                  ACTIVATE_AT_STARTUP(YES)
                  LIMITED_RESOURCE(USE_ADAPTER_DEFINITION)
                  LINK_STATION_ROLE(USE_ADAPTER_DEFINITION)
                  SOLICIT_SSCP_SESSION(YES)
                  EFFECTIVE_CAPACITY(USE_ADAPTER_DEFINITION)
                  COST_PER_CONNECT_TIME(USE_ADAPTER_DEFINITION)
                  COST_PER_BYTE(USE_ADAPTER_DEFINITION)
                  SECURITY(USE_ADAPTER_DEFINITION)
                  PROPAGATION_DELAY(USE_ADAPTER_DEFINITION)
                  USER_DEFINED_1(USE_ADAPTER_DEFINITION)
                  USER_DEFINED_2(USE_ADAPTER_DEFINITION)
                  USER_DEFINED_3(USE_ADAPTER_DEFINITION);

DEFINE_LOCAL_LU   LU_NAME(LU4 1A  )
                  LU_ALIAS(GW 1LU    )
                  NAU_ADDRESS(INDEPENDENT_LU);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DB2MN 3  )
                  PARTNER_LU_ALIAS(XAHTGGWA)
                  PARTNER_LU_UNINTERPRETED_NAME(DB2MN 3  )
                  MAX_MC_LL_SEND_SIZE(32767)
                  CONV_SECURITY_VERIFICATION(NO)
                  PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DB2MC 3  )
                  PARTNER_LU_ALIAS(XAGTHGWA)
                  PARTNER_LU_UNINTERPRETED_NAME(DB2MC 3  )
                  MAX_MC_LL_SEND_SIZE(32767)
                  CONV_SECURITY_VERIFICATION(NO)
```

```
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 1)
                PARTNER_LU_ALIAS(SQGWA  1)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 1)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 2)
                PARTNER_LU_ALIAS(SQGWA  2)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 2)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 3)
                PARTNER_LU_ALIAS(SQGWA  3)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 3)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 4)
                PARTNER_LU_ALIAS(SQGWA  4)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 4)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 5)
                PARTNER_LU_ALIAS(SQGWA  5)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 5)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 6)
                PARTNER_LU_ALIAS(SQGWA  6)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 6)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 7)
                PARTNER_LU_ALIAS(SQGWA  7)
                PARTNER_LU_UNINTERPRETED_NAME(DISGWA 7)
                MAX_MC_LL_SEND_SIZE(32767)
                CONV_SECURITY_VERIFICATION(NO)
                PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 8)
```

```
        PARTNER_LU_ALIAS(SQGWA  8)
        PARTNER_LU_UNINTERPRETED_NAME(DISGWA 8)
        MAX_MC_LL_SEND_SIZE(32767)
        CONV_SECURITY_VERIFICATION(NO)
        PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DB2MN 3  )
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DB2MC 3  )
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 1)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 2)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 3)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 4)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 5)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 6)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 7)
        WILDCARD_ENTRY(NO)
        FQ_OWNING_CP_NAME(IBMIDS1.CP    2)
        LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION   FQ_PARTNER_LU_NAME(IBMIDS1.DISGWA 8)
```

```
                WILDCARD_ENTRY(NO)
                FQ_OWNING_CP_NAME(IBMIDS1.CP     2)
                LOCAL_NODE_NN_SERVER(NO);

DEFINE_MODE   MODE_NAME(DISMODE  )
                COS_NAME(#CONNECT)
                DEFAULT_RU_SIZE(NO)
                MAX_RU_SIZE_UPPER_BOUND(1 24)
                RECEIVE_PACING_WINDOW(8)
                MAX_NEGOTIABLE_SESSION_LIMIT(32767)
                PLU_MODE_SESSION_LIMIT(2)
                MIN_CONWINNERS_SOURCE(1);

DEFINE_DEFAULTS   IMPLICIT_INBOUND_PLU_SUPPORT(YES)
                 DESCRIPTION(Created on  3- 9-94 at  3:58p)
                DEFAULT_MODE_NAME(BLANK)
                MAX_MC_LL_SEND_SIZE(32767)
                DIRECTORY_FOR_INBOUND_ATTACHES( )
                DEFAULT_TP_OPERATION(NONQUEUED_AM_STARTED)
                DEFAULT_TP_PROGRAM_TYPE(BACKGROUND)
                DEFAULT_TP_CONV_SECURITY_RQD(NO)
                MAX_HELD_ALERTS(1 );
```

Appendix A. Load Job Listing

This appendix shows a listing of the MET.JCL(LOAD) job, which you can use as a basis for changing some values as required for your site.

Changing the Job Statement

The MET.JCL job statement might need some changes to meet your site's requirements. The default job statement is:

```
//METLOAD        JOB   'LOAD   DISTRIBUTN   TAPE',MSGCLASS=A,CLASS=A
```

The DVOL parameter specifies the volume name of the disk where the new data sets are to be created. The default value is METVOL.

The disk must have enough space to allocate the data sets listed in Table 1 on page 1, and must have an additional track for the checkpoint data set allocated by the load job. This requires a total of about 150 tracks of 3380 disk space. See *Planning MVS Host-to-LAN Connectivity* for specific details on disk space and storage requirements.

The DUNIT parameter specifies the name of the disk unit where the new data sets are to be created. The default value is SYSDA.

The TVOL parameter specifies the volume label of the distribution tape.

The TUNIT parameter specifies the name of the tape unit to use for reading the distribution tape. The default name is TAPE.

The HLQ parameter specifies the high-level (and secondary-level, if applicable) qualifier for the data sets that are to be created. The default value is set using the conventions for the current Host Services version number.

The SYSOUT parameter specifies the system output class for the load utilities. The default value is * (asterisk).

MET.JCL(LOAD) Listing

```
//METLOAD JOB 'LOAD DISTRIBUTN TAPE',MSGCLASS=A,CLASS=A
//
//              CHECK AND UPDATE THE FOLLOWING PARMS BEFORE SUBMITTING
//             THIS  JOB.
//
//METLOAD PROC DVOL=METVOL,/  DISK VOLUME FOR NEW DATA SETS              /
//               DUNIT=SYSDA,            /  DISK UNIT NAME FOR NEW DATA SETS         /
//               TVOL=HS21 ,          /  TAPE VOLUME FOR DISTRIBUTION TAPE       /
//               TUNIT=TAPE,            /  TAPE UNIT NAME FOR DISTRIBUTION TAPE  /
//               HLQ='MET.V2R1M ',/  HIGH LEVEL DATA SET NAME QUALIFIERS  /
//               SYSOUT=' '             /  SYSOUT CLASS FOR LISTINGS                    /
//
//              CREATE THE LOAD DATA SET
//
```

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```
//LOAD        EXEC  PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT DD      SYSOUT=&SYSOUT
//SYSIN        DD      DUMMY
//SYSUT1       DD      DSN=MET.LOAD,DISP=(OLD,PASS),
//               UNIT=&TUNIT,VOL=SER=&TVOL,
//               LABEL=(2,SL,,,EXPDT=98   )
//SYSUT2       DD      DSN=&HLQ..LOAD,DISP=(,CATLG,DELETE),
//               UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(13 3 ,(12 ,2 ,4)),
//               DCB=(RECFM=U,BLKSIZE=13 3 )
//
//             CREATE THE LPALIB DATA SET
//
//LPALIB     EXEC    PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT   DD      SYSOUT=&SYSOUT
//SYSIN        DD      DUMMY
//SYSUT1       DD      DSN=MET.LPALIB,DISP=(OLD,PASS),
//               UNIT=&TUNIT,VOL=SER=&TVOL,
//               LABEL=(3,SL,,,EXPDT=98   )
//SYSUT2       DD      DSN=&HLQ..LPALIB,DISP=(,CATLG,DELETE),
//               UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(13 3 ,(3,3,1)),
//               DCB=(RECFM=U,BLKSIZE=13 3 )
//
//             CREATE THE AUTHLIB DATA SET
//
//AUTHLIB EXEC PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT DD      SYSOUT=&SYSOUT
//SYSIN        DD      DUMMY
//SYSUT1       DD      DSN=MET.AUTHLIB,DISP=(OLD,PASS),
//               UNIT=&TUNIT,VOL=SER=&TVOL,
//               LABEL=(4,SL,,,EXPDT=98   )
//SYSUT2       DD      DSN=&HLQ..AUTHLIB,DISP=(,CATLG,DELETE),
//               UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(13 3 ,(3,3,1)),
//               DCB=(RECFM=U,BLKSIZE=13 3 )
//
//             CREATE THE C RUNTIME DATA SET
//
//RUNTIME   EXEC   PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT   DD      SYSOUT=&SYSOUT
//SYSIN        DD      DUMMY
//SYSUT1       DD      DSN=MET.RUNTIME,DISP=(OLD,PASS),
//               UNIT=&TUNIT,VOL=SER=&TVOL,
//               LABEL=(5,SL,,,EXPDT=98   )
//SYSUT2       DD      DSN=&HLQ..RUNTIME,DISP=(,CATLG,DELETE),
//               UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(13 3 ,(17 ,5 ,2 )),
//               DCB=(RECFM=U,BLKSIZE=13 3 )
//
//             CREATE THE DBRMLIB DATA SET
//
//DBRMLIB   EXEC   PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT   DD      SYSOUT=&SYSOUT
//SYSIN        DD      DUMMY
//SYSUT1       DD      DSN=MET.DBRMLIB,DISP=(OLD,PASS),
```

```
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(6,SL,,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..DBRMLIB,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(312 ,(9,9,1)),
//              DCB=(RECFM=FB,LRECL=8 ,BLKSIZE=312 )
//
//            CREATE THE CONFIG DATA SET
//
//CONFIG    EXEC    PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT  DD     SYSOUT=&SYSOUT
//SYSIN       DD     DUMMY
//SYSUT1      DD     DSN=MET.CONFIG,DISP=(OLD,PASS),
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(7,SL,,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..CONFIG,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(312 ,(9,9,2)),
//              DCB=(RECFM=FB,LRECL=8 ,BLKSIZE=312 )
//
//            CREATE THE MVSENU DATA SET
//
//MVSENU    EXEC    PGM=IEBGENER,COND=( ,NE)
//SYSPRINT  DD     SYSOUT=&SYSOUT
//SYSIN       DD     DUMMY
//SYSUT1      DD     DSN=MET.MVSENU,DISP=(OLD,PASS),
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(8,SL,,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..MVSENU,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(23476,(4,1,2)),
//              DCB=(RECFM=VB,LRECL=259,BLKSIZE=23476)
//
//            CREATE THE SAMPLIB DATA SET
//
//SAMPLIB   EXEC   PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT  DD     SYSOUT=&SYSOUT
//SYSIN       DD     DUMMY
//SYSUT1      DD     DSN=MET.SAMPLIB,DISP=(OLD,PASS),
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(9,SL,,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..SAMPLIB,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(312 ,(11 ,2 ,4)),
//              DCB=(RECFM=FB,LRECL=8 ,BLKSIZE=312 )
//
//            CREATE THE MACLIB DATA SET
//
//MACLIB    EXEC    PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT  DD     SYSOUT=&SYSOUT
//SYSIN       DD     DUMMY
//SYSUT1      DD     DSN=MET.MACLIB,DISP=(OLD,PASS),
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(1 ,SL,,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..MACLIB,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(312 ,(6 ,2 ,6)),
```

```
//               DCB=(RECFM=FB,LRECL=8 ,BLKSIZE=312 )
//
//             CREATE THE SQLMACRO DATA SET
//
//SQLMACRO EXEC    PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT   DD     SYSOUT=&SYSOUT
//SYSIN       DD     DUMMY
//SYSUT1      DD     DSN=MET.SQLMACRO,DISP=(OLD,PASS),
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(11,SL,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..SQLMACRO,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(616 ,(42,2 ,3)),
//              DCB=(RECFM=VB,LRECL=15 ,BLKSIZE=616 )
//
//             CREATE THE REXXLIB DATA SET
//
//REXXLIB   EXEC   PGM=IEBCOPY,COND=( ,NE)
//SYSPRINT   DD     SYSOUT=&SYSOUT
//SYSIN       DD     DUMMY
//SYSUT1      DD     DSN=MET.REXXLIB,DISP=(OLD,PASS),
//              UNIT=&TUNIT,VOL=SER=&TVOL,
//              LABEL=(12,SL,,EXPDT=98   )
//SYSUT2      DD     DSN=&HLQ..REXXLIB,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(312 ,(55,2 ,4)),
//              DCB=(RECFM=FB,LRECL=8 ,BLKSIZE=312 )
//
//             CREATE THE CHKPOINT DATA SET
//
//CHKPOINT EXEC    PGM=IEFBR14,COND=( ,NE)
//CHKPOINT   DD     DSN=&HLQ..CHKPOINT,DISP=(,CATLG,DELETE),
//              UNIT=&DUNIT,VOL=SER=&DVOL,SPACE=(6144,(2,1)),
//              DCB=(RECFM=VB,LRECL=8 ,BLKSIZE=6144)
//
//             PEND
//
//LOADTAPE EXEC METLOAD
```

Appendix B. Configuration Parameter Reference

Host Services configuration information is specified within a partitioned data set whose DD name is SYSPARM. One member in this data set is the Control member. The default member name is METCNTRL. It contains configuration information applicable to the Host Services service manager address space, including information that is common to all gateways that communicate with that service manager address space. Separate gateway configuration members contain configuration information that is unique to the individual gateways.

Another way to specify configuration parameters is by using the Host Services command !SET. Host Services administration commands are described in detail in *Administering Host Services for MVS: DB2 and Cooperative Application Services*.

Parameters in the Control member are applied during initialization of the service manager address space. After initialization, if you use the !SET command, the new value applies until the service manager address space is stopped or the value is reset. Some configuration parameters might not take effect for currently running services; they will take effect when the service is restarted. The only way to reconfigure values in a gateway configuration member is to edit the appropriate member, and then use the Host Services commands !STOP and !START from the MVS interface to stop and re-enable communications with the corresponding gateway.

The !STOP gateway_name command terminates all service address spaces that are associated with the specified gateway.

Sample Configuration Members

The sample configuration data set, MET.CONFIG, distributed with Host Services, contains three members:

METCNTRL, the Control member, holds default values for all configuration parameters with GATEWAY statements to specify the gateway configuration members.

GWASQS is an SQL gateway configuration member describing DB2 gateway GWA.

GWBCAS is a CAS gateway configuration member describing CAS gateway GWB.

These members are listed in Chapter 4, “Configuring Host Services” on page 22.

Each GATEWAY statement in METCNTRL requires the presence of a separate gateway configuration member in the MET.CONFIG data set, containing configuration information for that gateway. Some Host Services commands, such as !START, use the gateway configuration member's name.

The TP name associated with a service's APPC conversation is not explicitly configured. Instead, Host Services determines the TP name during execution, using the following format:

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ppgggnnn

where:

pp The CPREFIX value specified in the gateway configuration member. This prefix is *SQ* for SQL gateways or *CA* for CAS gateways.

ggg The gateway identifier, also specified in the gateway configuration member, indicating the gateway with which the Host Services address space is identified. All examples and discussions in this book assume that the gateway identifier is *GWA* for SQL host services or *GWB* for CAS host services.

nnn A 3-digit, decimal Host Services service address space identifier number. The numbering (within the set of service address spaces associated with gateway *ggg*) starts with 001.

For example, a set of eight service address spaces for communicating with an SQL database (DB2) gateway might be named SQGWA001, SQGWA002, and so forth, through SQGWA008. For communicating with a CAS gateway, the service address spaces might be named CAGWB001 through CAGWB008.

APPLID and LU names are site-selectable, but the mapping of TP names to LU names must be the same in the configuration of Host Services as in Communications Manager/2 residing with the gateway on the LAN.

Control Member Parameters

Table 5 lists the parameter keywords in the Control member, and with each parameter's default value (if any), description, and valid values. The parameter names cannot be abbreviated. The syntax for service manager commands is described in *Administering Host Services for MVS: DB2 and Cooperative Application Services*.

Table 5 (Page 1 of 7). Parameters in the Control member

Keyword	Default	Description
!any valid service manager command	—	Performs the command when the Host Services service manager address space is started.
APPLID-FOR-GTH	—	Specifies the application ID name for the service manager task's APPC conversations with all of its gateways.
APPLID-FOR-HTG	—	Specifies the application ID name for the monitor task's APPC conversations with all of its gateways.
ATTACHINTERVAL	30	Specifies the number of seconds to wait before timing out on completion of subtask ATTACH. If the interval expires, the requesting task terminates. If a Host Services address space cannot start its subtasks, it terminates its own initialization.

Table 5 (Page 2 of 7). Parameters in the Control member

Keyword	Default	Description
CASMEM	100	The number of kilobytes of dynamic storage to be used by CAS data encoding/decoding. Transferring complex data between the host and workstation may require more dynamic storage than provided by default.
CASPROC	METCAS	Specifies the name of the cataloged procedure that the service manager task uses to start a CAS service address space. Use of different Host Services procedures lets the PERFORM parameter (on the EXEC statement) specify different performance groups for different Host Services subsystems or gateways. It also permits use of alternate STEPLIBs for testing subsystems or gateways. You can specify this cataloged procedure in either the Control member or a gateway configuration member.
CONLEVEL	W	Specifies the minimum severity level for messages to be written to the MVS console. In order of increasing severity, severity levels are I (informational), W (warning), E (recoverable error), and S (severe error). Another level, M, designates messages that are always written to the console. (Level M does not imply an abnormal or error situation.) Console messages are always written to the trace file, regardless of message severity levels, if trace has been activated.
CONNECTEXIT	METCNCTX	Specifies the name of the exit routine to be executed when a user wants to connect to a service. This routine authenticates the user ID and password and can be used to set up information for customer billing and charge-back algorithms. The default routine, METCNCTX, provided with Host Services, uses RACROUTE for user authentication.
DB2PLAN	—	Specifies for a DB2 subsystem the prefix for Host Services application plan names. Parameter 1 to the DB2PLAN keyword is the DB2 subsystem name; parameter 2 is the plan name prefix. Example: DB2PLAN DSN METPLAN. SQL routines append C or R to the plan-name prefix to generate the full plan name. Therefore, the plan names for the example are METPLANC and METPLANR.

Table 5 (Page 3 of 7). Parameters in the Control member

Keyword	Default	Description
DB2SS	DSN	Specifies the default subsystem name that Host Services is to use when a user connects to DB2 and either specifies the DB2 subsystem name DBS or does not explicitly specify a DB2 subsystem name.
DEGREE-ANY	NO	Specifies whether the SQL service should issue the SQL statement SET CURRENT DEGREE='ANY' each time it opens a thread. There is some processing overhead associated with this parameter, but setting it can be beneficial for certain queries.
GATEWAY	—	Specifies the name of a gateway configuration member within the configuration data set. The configuration data set must have one such member for each gateway. Also, the Control member must have one GATEWAY line for each gateway if communications with that gateway are to start automatically.
HOST-CODE-PAGE	037	Specifies the 3-digit number of the code page that Host Services is to use when converting character data. Any code-page specification in a gateway configuration member has precedence over the corresponding code-page specification in the Control member. The default for this field is 037, which specifies the EBCDIC code page for United States English, Canadian, Dutch, and Brazilian Portuguese.
INTERNALTRACE	0	Specifies the number of entries, in the internal trace table, to allocate per task. These entries are maintained as circular buffers. This feature is usually enabled only if you are experiencing difficulties with normal logging and tracing.
LOGLEVEL	I	Specifies the minimum severity level for messages to be written to the Host Services log. In order of increasing severity, severity levels are I (informational), W (warning), E (recoverable error), and S (severe error). Another level, M, designates messages that are always written to the log. (Level M does not imply an abnormal or error situation.) Log messages are always written to the trace file, regardless of message severity levels, if trace has been activated.
LOGMODE	—	Specifies the name of the VTAM logon-mode table entry.

Table 5 (Page 4 of 7). Parameters in the Control member

Keyword	Default	Description
LOGPOOL	5 5	Specifies the primary and secondary number of log and trace message blocks (LTMBs) for each allocation of a cell pool in extended common service area (ECSA) containing LTMBs. If allocation of a secondary cell pool would cause MAXECSA to be exceeded, the expansion is denied and the task waits for one second before retrying.
MAXECSA	50	Specifies the maximum amount of ECSA that Host Services can allocate, in units of 1024 bytes (1 KB). A value of 0 specifies no artificial restriction on ECSA allocation. The MAXECSA limit does not include ECSA allocations by other MVS facilities, such as VTAM and DB2. Be sure that your system has enough ECSA available to meet the specified amount.
MAXSERVICES	0	Specifies the maximum number of service address spaces that the service manager address space can start. If a gateway tries to start another service address space after the MAXSERVICES limit is reached, the request is denied. The default value of 0 sets the limit at the number of Host Services transaction program (TP) names that are defined in the gateway configuration members.
MESSAGE-CASE	MIXED	Must be either MIXED or UPPER, to specify whether console and log messages are to be displayed in mixed-case characters or are to be translated to uppercase before being displayed.
OPERPOOL	2 2	Specifies the primary and secondary number of operator-command input blocks (OCIBs) for each allocation of a cell pool in ECSA containing OCIBs. If allocation of a secondary cell pool would cause MAXECSA to be exceeded, the expansion is denied and the operator is told to retry later.
PERM-CONNECT	NO	Specifies whether a SQL service address space's connection to DB2 should last for the lifetime of the address space. Specifying *YES* minimizes resource consumption when a user connects to DB2. The number of DB2 connections is limited, however; any DB2 -DISPLAY THREAD(*) command displays the idle permanent connections.

Table 5 (Page 5 of 7). Parameters in the Control member

Keyword	Default	Description
REQUIRE-DPF	NO	Specify YES or NO. The Desktop Password Facility (DPF) provides a secure method of ensuring that the user of a data access icon is authorized to use that icon. This option allows the IDS system administrator to require that all users connecting to this system use DPF.
ROUTCDE	2	Specifies which consoles are to receive console messages. The default (2) specifies Master Console Information. You can specify 1 to 15 console numbers, separating them by commas or spaces; for example, ROUTCDE 2,3 5
SQLEXIT	METSQLX	Specifies the name of the exit routine that is to be executed before and after each SQL statement received from the workstation. A value of NONE specifies that this routine is not required.
SQSMEM	100	The number of kilobytes of dynamic storage to be used by SQL data encoding/decoding. Transferring complex data between the host and workstation may require more dynamic storage than provided by default.
SQSPROC	METSQS	Specifies the name of the cataloged procedure that the service manager task uses to start an SQL service address space. Use of different Host Services procedures lets the PERFORM parameter (on the EXEC statement) specify different performance groups for different Host Services subsystems or gateways. It also permits use of alternate STEPLIBs for testing subsystems or gateways. You can specify this cataloged procedure in either the Control member or a gateway configuration member.
SRBPOOL	10 10	Specifies the primary and secondary number of service request blocks (SRBs) for each allocation of a cell pool in ECSA containing SRBs. If allocation of a secondary cell pool would cause MAXECSA to be exceeded, the allocation is denied and the allocation request is either aborted with an error message or retried (depending on the function being executed).

Table 5 (Page 6 of 7). Parameters in the Control member

Keyword	Default	Description
STATUSEXIT	NONE	Specifies the name of the exit routine that is to report Host Services status information periodically. The user exit routine specified in STATUSEXIT formats and prints Host Services status information at time intervals specified in the STATUSINTERVAL parameter. A value of NONE specifies that this routine is not required. The routine returns 0 if it has handled all status information; or returns nonzero if Host Services should also write its usual status information. The routine must be written in assembler code.
STATUSINTERVAL	900	Specifies the number of seconds the system should wait between status reports. A user exit routine, specified in the STATUSEXIT parameter, formats and prints Host Services status information at time intervals specified in STATUSINTERVAL. The default value (900) specifies an interval of 15 minutes. Specifying 0 or OFF turns off the reporting facility.
SVC-CALLER-VERIFICATION	OFF	Must be ON or OFF. If you specify ON, the Host Services supervisor call (SVC) validates that the caller of the SVC is either a Host Services address space, the console address space, the master scheduler address space, or the primary subsystem address space. With ON specified, TSO users cannot enter Host Services commands through the System Display and Search Facility (SDSF) or similar facilities. Failed validation causes the SVC to return an error code and to not perform the function.
SVCNUMBER	224	Specifies the SVC number for Host Services routines to use when performing authorized functions. The METSVC routine must be installed in SYS1.LPALIB as a type-3 SVC. The SVC number named in the subsystem specification (IEFSSNxx) is the one used to start the service manager address space; therefore, specifying the SVCNUMBER parameter in the configuration data set is useful only for testing a new SVC after the service manager address space has started.
TANPOOL	8 8	Specifies the primary and secondary number of task action/notification blocks (TANBs) for each allocation of a cell pool in ECSA containing TANBs. If allocation of a secondary cell pool would cause MAXECSA to be exceeded, the expansion is denied and the task needing to queue the action or notification can choose to retry or to continue processing.

Table 5 (Page 7 of 7). Parameters in the Control member

Keyword	Default	Description
THREAD	CONNECT	Must be CONNECT or LUW. If you specify CONNECT, the DB2 thread required for SQL requests is opened when the workstation user connects to DB2 and is closed when the user disconnects. With LUW, the DB2 thread is opened and closed at the beginning and end of each logical unit of work.
TRACE-CLASS	A	Specify the SYSOUT class that is to be used to allocate Host Services trace data sets when the !TRACE START command is used. Use A-Z or 1-9. You cannot use *.

Gateway Communications Parameters

Table 6 lists the parameter keywords in a gateway configuration member, and each parameter's description and valid values. None of these parameters has a default value. The parameter names cannot be abbreviated.

To reconfigure values in a gateway configuration member, edit the appropriate member and then use !STOP and !START commands from the MVS interface to stop and restart communications with the corresponding gateway.

Table 6 (Page 1 of 2). Parameters in the gateway configuration member

Keyword	Description
CASPROC	Specifies the name of the cataloged procedure that the service manager task uses to start a CAS service address space. Use of different Host Services procedures lets the PERFORM parameter (on the EXEC statement) specify different performance groups for different Host Services subsystems or gateways. It also permits use of alternate STEPLIBs for testing subsystems or gateways. You can specify this cataloged procedure in either the Control member or a gateway configuration member. A CASPROC specification in a gateway configuration member has precedence over the CASPROC specification in the Control member.
CPREFIX	Specifies the 2-letter prefix for the Host Services tasks' TP names. This prefix is *SQ* for SQL (DB2) gateways or *CA* for CAS gateways.
GATEWAY-ID	Specifies the 3-character database gateway identifier. The gateway identifier is used in forming host service and service manager TP names and in the syntax of the Host Services commands !DISPLAY, !LOGON, and !STOP. It must be three characters in length, and must be unique for each gateway connecting to the same MVS system.

Table 6 (Page 2 of 2). Parameters in the gateway configuration member

Keyword	Description
GATEWAY-TYPE	Specifies whether this gateway is a CAS gateway (CAS) or an SQL (DB2) gateway (SQS).
HOST-CODE-PAGE	Specifies the 3-digit number of the code page that is used for character data. Any code-page specification in a gateway configuration member has precedence over the corresponding code-page specification in the Control member.
PARTNER-LU-FOR-GTH	Specifies the remote LU name and the PU type for the APPC conversation through which the service manager task receives commands from the gateway. The PU type must be 2.1.
PARTNER-LU-FOR-HTG	Specifies the remote LU name and the PU type for the APPC conversation through which the Monitor task sends “Service started” and “Service stopped” messages to the database gateway. The PU type must be 2.1.
SERVICE LU(S)	Each line following this header specifies the application ID name, remote LU name, and PU type for a specific service address space. For example: METGWA 1 LUGWA PU2.1 / SERVICE 1 / METGWA 2 LUGWA PU2.1 / SERVICE 2 / The host service LU lines must be the last lines in a gateway configuration member. The PU type must be 2.1.
SQSPROC	Specifies the name of the cataloged procedure that the service manager task uses to start an SQL service address space. Use of different Host Services procedures lets the *PERFORM* parameter (on the EXEC statement) specify different performance groups for different Host Services subsystems or gateways. It also permits use of alternate STEPLIBs for testing subsystems or gateways. You can specify this cataloged procedure in either the Control member or a gateway configuration member. An SQSPROC specification in a gateway configuration member has precedence over the SQSPROC specification in the Control member.

Appendix C. Installing Host Services Updates

If you upgrade from DIS Version 1.3.x, then you should install Host Services as a new installation rather than an update. All Host Services modules have new names, so there are no special considerations for running two Host Services subsystems (that is, you can ignore Appendix D, “Running Two Host Services Releases” on page 53).

The format of a Host Services update tape is the same as that of an original installation tape. Original configuration work does not have to be repeated when you install updated software except as specifically noted.

To install updates to the Host Services software:

1. Decide on a new high-level qualifier for the names of distribution data sets. For example, if your existing qualifier is MET.V1R0A, you might use a new qualifier such as MET.V1R0B.
2. Create and load the new MET.JCL data set with IEBCOPY, as you did for the original installation, but using the new high-level qualifier and the new tape volume label.
3. Use the LOAD member of your new JCL data set (after making any appropriate modifications) to create and load the remaining distribution data sets from the installation tape.
4. Move the LPALIB and AUTHLIB data set members to the data sets that you will use when you perform an IPL of the system.
5. If you have previously moved optional Host Services modules to the ELPA, be sure to refresh the corresponding LPA library with the new modules from the update tape.
6. Replace the numbers of the new CONFIG data set with the members of your old CONFIG data set.
7. Update the BIND job in MET.JCL to bind the Host Services application plans for your DB2 subsystems. Refer to the old BIND job for specific plan name information.

   You can perform the previous steps at any time before an IPL without affecting operation of the currently installed Host Services software.
8. Perform an IPL of your system, using the CLPA parameter as well as any others that your site requires. The CLPA parameter installs the new LPA modules.
9. Edit the cataloged procedures for your service manager address space, service address spaces, and WTDD builder program to point to the new Host Services libraries.
10. Submit the BIND job to rebind all of your Host Services application plans.
11. Enter a !START METSERV command to restart the service manager address space. For more information about using Host Services commands, see *Administering Host Services for MVS: DB2 and Cooperative Application Services*.

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Appendix D. Running Two Host Services Releases

Before changing to a new release level of Host Services, you might prefer to install the new release for testing purposes while maintaining your current level for production. You can do this by loading the new subsystem into ECSA instead of ELPA. Such an installation requires use of two utility programs, METSSCSA and METSVCT.

METSSCSA loads the new subsystem code into ECSA and initializes the subsystem control blocks for it. This process consumes about 40 kilobytes of Extended CSA and remains in use until your next IPL.

METSVCT is identical to METSVC at the new release level, except for its name. It thereby lets you run the new level of the SVC (using a different SVC number), while leaving the old SVC in place for use by the production system.

To perform this installation:

1. Define a new subsystem in SYS1.PARMLIB(IEFSSNxx) and the new SVC(METSVCT) in SYS1.PARMLIB(IEASVCxx).
2. Copy METSVCT from MET.AUTHLIB to an LPA library.
3. Perform an IPL, leaving your old-level METSSFR and METSVC routines in the LPA. The new level of METSSFR is loaded into ECSA after the IPL, when you run job ALTSS.
4. Modify job MET.JCL(ALTSS) as needed for your site and run it to initialize your new subsystem. Figure 16 on page 54 shows MET.JCL(ALTSS). Be sure to set, in ALTSS, the correct Host Services subsystem name, new SVC number, command recognition character, and service manager address space cataloged procedure name.
5. Prepare the configuration files and cataloged procedures.
6. Enter a !START METSERV command from the host interface to start the service manager address space. For more information about using Host Services commands, see *Administering Host Services for MVS: DB2 and Cooperative Application Services*.

   You cannot use the production configuration files for the test system while the production system is running. You can, however, use the same configuration file if only one of the two Host Services systems is running at any one time.
7. Bind the application plans for the new system.

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```
//ALTSS JOB 'INITIALIZE SUBSYSTEM',MSGCLASS=X,CLASS=A
//*
//*      THIS JOB FREES ECSA REQUESTED BY EARLIER STARTUPS OF THE
//*      HOST SERVICES SUBSYSTEM SPECIFIED IN THE PARAMETER LIST. IT
//*      THEN LOADS THE SUBSYSTEM MODULE (METSSFR) INTO ECSA THE
//*      INITIALIZES IT USING THE PARAMETERS IN THE LIST.
//*
//*      SYNTAX:
//*               EXEC PGM=METSSCSA,PARM='SSSS!,PPPPPPPP,NNN'
//*      WHERE:
//*               SSSS = HOST SERVICES SUBSYSTEM NAME (USE 4 CHARS)
//*               ! = SUBSYSTEM COMMAND RECOGNITION CHARACTER(S)
//*               ,PPPPPPPP = PROC NAME FOR SERVICE MANAGER ADDRESS SPACE
//*               ,NNN = SVC NUMBER FOR HOST SERVICES
//*
//*      IMPORTANT:  THE STEPLIB DATA SETS MUST BE APF AUTHORIZED.
//*
//ALTSS       EXEC PGM=METSSCSA,PARM='MET2/,METTEST,227'
//STEPLIB     DD  DSN=MET.AUTHLIB,DISP=SHR
//            DD  DSN=MET.LPALIB,DISP=SHR
//SYSUDUMP    DD  SYSOUT=*
```

Figure 16. Sample job MET.JCL(ALTSS)

Appendix E. User ID Translation Enablement

The Host Services connect exit routine supports a facility to permit mapping of the user's desktop name and LAN number to an MVS account ID. This is primarily for backwards compatibility for Host Services installations that have required this capability prior to the security enhancements provided IDS.

To enable use of the desktop mapping routine in the connect exit:

Assemble the METCNCTX exit routine with the MAPPER=YES parameter (see "Building the Connect Exit" on page 9 and "General Address Space-Related Parameters" on page 26).

Build an in-storage account table that is accessible to the IDS Host Services address spaces.

Building an In-Storage Account Table

The main function of the in-storage table builder program, METACTBL, is to build a desktop name-to-account ID table in the extended common service area (ECSA), subpool 241. This table is referred to as the in-storage table.

The in-storage table has the following inputs:

LAN number

Desktop name

Corresponding MVS account ID

For practical purposes and security considerations, the input to METACTBL is stored in a DB2 table. Before building the in-storage table, the rows of the table are fetched in ascending order of LAN numbers, length of desktop names, and desktop names within each LAN number. The in-storage table builder permits one in-storage table to be shared by all the Host Services subsystems in a given MVS system. The structure of the in-storage table is shown in Figure 17 on page 59.

After the in-storage table is built, the Subsystem Data Area (SSDA) of the user-specified Host Services subsystems are located, one at a time. If this is an old in-storage table, it is freed and the address of the new in-storage table is placed in the **SSDAUSR1** field of the SSDA. In addition, the in-storage table builder program produces a Summary Statistics report with concise information regarding the in-storage table.

After each system IPL, the in-storage table builder program must be rerun to rebuild the in-storage table in the ECSA. This action should be made part of the Host Services startup process.

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In-Storage Table Builder Characteristics

The in-storage table builder is written in Assembler H. The residency mode (RMODE) of the in-storage table builder is 24. The addressability mode (AMODE) of the program fluctuates between 31 and 24, as required.

In-Storage Table Builder Input Requirements

The input requirements for the in-storage table builder program consist of:

Explicit parameters

The SYSIN data set

The DESKTOP_TO_ACCOUNT DB2 Table

Explicit Parameters

The DB2 subsystem ID and the DB2 application plan name for the in-storage table builder program must be provided to the program in the job setup JCL using the PARM parameter of the EXEC statement as follows:

```
PARM = 'ssid,planname'
```

ssid The name of the DB2 subsystem that contains the DESKTOP_TO_ACCOUNT DB2 table.

planname The name of application plan that contains DBRM METACTBL.

The delimiter in this statement must be a comma.

SYSIN Data Set

The SYSIN data set is a required file that contains the names of the Host Services subsystems that you want to have access to the in-storage table. Each subsystem name must be on a separate input record.

The record length of the SYSIN data set is 80 bytes.

Desktop Name-to-Account ID DB2 Table

For practical purposes and security considerations, the data used in constructing the in-storage table is kept in a DB2 table. To ensure the uniqueness of the LAN users, the LAN_NUMBER and DESKTOP_ID can be made the table's primary key. In addition, if each LAN user is required to have a unique account ID, then a unique index can be created on the ACCT_ID column.

The following data structure shows the columns of DESKTOP_TO_ACCOUNT, the DB2 table processed by the in-storage table builder program:

```
LAN_NUMBER      CHAR(8)          NOT NULL
DESKTOP_ID      VARCHAR(64)      NOT NULL
ACCT_ID         CHAR(7)          NOT NULL

PRIMARY KEY: (LAN_NUMBER,DESKTOP_ID)
```

A job to assemble the program and bind the application plan for METBLDTB is in MET.JCL(ASMACTBL).

A job to create the tablespace, table, and index for the DESKTOP_TO_ACCOUNT table is in MET.JCL(BLDACTBL). This job uses the METWTBLD cataloged procedure to run the required SQL. It assumes that the required DB2 database and storage groups already exist. See MET.SQLMACRO(DSNACCT) for the SQL that will be run.

A job to run the METACTBL program is in MET.JCL(RUNACTBL).

In-Storage Table Builder Output

The output of the in-storage table builder consists of:

The in-storage Desktop-Name-to-Account-ID table

The summary statistics report

Return codes and, possibly, user abend codes

In-Storage Desktop Name-to-Account ID Table

The In-storage Desktop Name-to-Account ID table (in-storage table) is the main output of the in-storage table builder program. This table has been structured to minimize virtual storage requirements.

This table is actually a set of subtables, one per LAN. The list of the desktops for each LAN is a set of sublists, one table for each possible length of the desktop name, which can range from 1 to 64 characters. For example, there is one list for 4-character desktop names for LAN1, a different list for the 4-character desktop names for LAN2, and so on.

There is an 8-byte eyecatcher at the beginning and another one at the end of the in-storage table (METDTMAP). There are three full words immediately after the header eye-catcher and before the first LAN Number subtable as follows:

The first full word contains the beginning address of the table.

The second full word contains the size of the table.

The third full word is a flag used by the in-storage table builder and the Desktop Mapping Exit programs.

- The first two bytes of the flag, the availability bytes, indicate whether the in-storage table can be accessed. When these two bytes contain binary 1 (X'0001'), the in-storage table builder Program is about to delete and replace the table with an updated version. These two bytes must be tested prior to any in-storage table lookup.
- The next two bytes of the flag keep a count of the users (that is, Desktop Mapping exit routines) that are currently using the table. The in-storage table must not be deleted or replaced with a new version unless this count is 0.

Figure 17 on page 59 illustrates the structure of the in-storage table. Each box in the table consists of a full word (four bytes), unless otherwise indicated. The boxes labeled

LEN()CNT() are full words with the length of the desktop name in the high-level byte and the number of entries of that length in the low-order three bytes. The boxes labeled DXTOP()+ACCNTID()... contain a number of fixed-length entries representing n-byte desktop names and 7-byte account IDs.

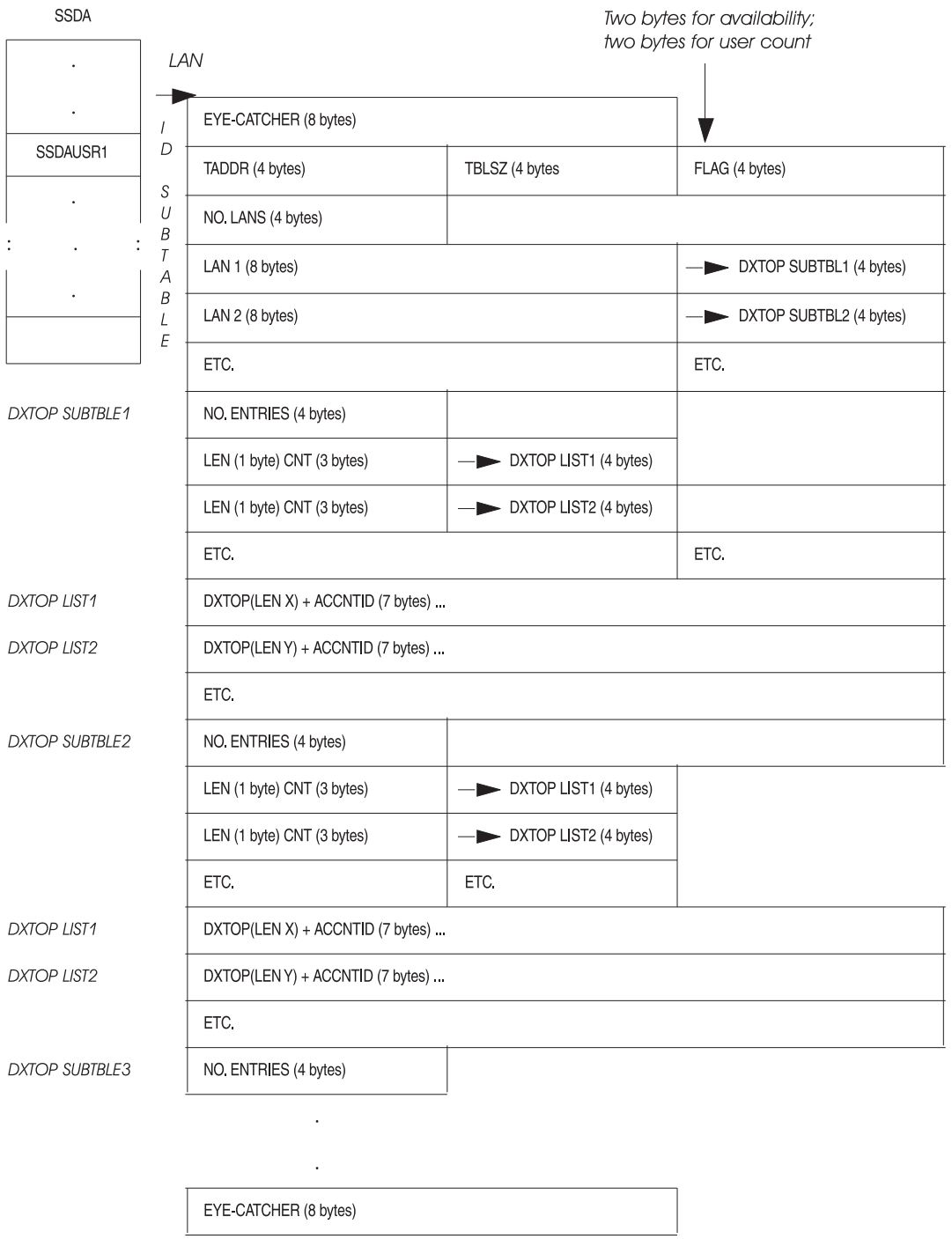

Figure 17. In-storage table (METDTMAP) data structure

The in-storage table can be relocated. Accordingly, all its pointers are offset from the beginning of the table. To calculate the actual address, you must add the address of the in-storage table to the offset.

Summary Statistics Report

The in-storage table builder produces a Summary Statistics Report that summarizes the number of unique LAN numbers, number of desktop names, size of the in-storage table in bytes, and the starting and ending addresses of the in-storage table in ECSA.

Figure 18 shows a sample Summary Statistics Report.

SUMMARY STATISTICS

UNIQUE LAN IDS	DESKTOPS	TABLE SIZE (IN SP 241)	START OF TABLE ADDR	END OF TABLE
5	134	1902	X'0391D000'	X'0391D76'

Figure 18. Summary Statistics Report

Return Codes and User Abends

Upon successful completion of the in-storage table builder program, a return code of 0 is returned in register 15. Otherwise, a nonzero return code is accompanied with an appropriate message in the data set.

The in-storage table builder terminates with a user abend code of 99 if one of the following conditions occurs:

- A GETMAIN failure occurs
- The **PARM** field of the EXEC statement is missing or incorrect

In each case an appropriate message accompanies the return code.

Mapping a Desktop to an Account ID

The mapping of a given desktop name to an MVS account ID is performed by the Desktop Mapper routine. This routine, which is incorporated into the connect exit, METCNCTX, converts the desktop name (METTDTID) and LAN number (METTLNID) in the METTCBU control block to an account ID. METCNCTX passes the account ID (METTACCT) and the password (METTUPWD) of the METTCBU control block to the host security package through the RACROUTE macro for access verification.

Prior to table lookup, the Desktop Mapper Exit program examines the availability flag of the in-storage table. If the table is not being updated, it increments the number of active users of the table (that is, the last two bytes of the flag in the in-storage table) by 1 prior to table lookup and decrements by 1 after the table lookup.

The Desktop Mapper routine uses either a direct or a binary search technique to find the corresponding account ID for the given LAN number and desktop name. The decision to select one of the two techniques over the other is made internally. Currently, a binary search is selected if the number of entries to be searched is greater than 20.

For compatibility purposes, if there is no match for the given LAN number and desktop name, or if the in-storage table does not exist (that is, SSDAUSR1 contains zeros) the account ID (METTACCT) is set to the first seven characters of the user ID from the data access tool attempting to establish connection to the MVS host or DB2. Otherwise, METTACCT is set to the corresponding account ID from the in-storage table.

Desktop Mapper Return Codes

The Desktop Mapper routine communicates the result of the table lookup back to the caller by returning one of the return codes shown in Table 7 in register 15.

Table 7. Desktop Mapper routine return codes

Code	Meaning
0	A match for the LAN number and desktop name was found. METTACCT is set to the corresponding account ID in the in-storage table.
110	A work area was not provided.
120	The pointer to the in-storage table (SSDAUSR1) is 0.
160	The in-storage table is overlaid.
200	No match for the LAN number was found.
400	No match for the length of the desktop name was found.
800	No match for the desktop name was found.

In case of unsuccessful table lookup (nonzero return code), METCNCTX will either attempt to use the first seven characters of the desktop name or fail the connection attempt immediately, depending on the value of the NOMATCH parameter to the METCNCTX macro.

Glossary

access method. The way in which an application reads from or writes to a resource.

address space. A range of virtual storage addresses created and maintained by the MVS operating system for data and program residence and for program execution; also, the program executing in an address space. MVS allocates real storage, processor, and input/output resources to an address space as needed to execute a program in that address space. MVS can maintain and control a large number of address spaces concurrently.

Advanced Program-to-Program Communications. An implementation of the SNA LU 6.2 protocol that allows interconnected systems to communicate and share the processing of programs.

APF. Authorized Program Facility.

API. Application program interface.

APPC. Advanced Program-to-Program Communications.

application. A collection of software components used to perform specific types of user-oriented work on a computer. The terms application, application program, program, and tool are sometimes used interchangeably.

application plan. In the MVS environment, the DB2 control structure produced during the bind process and used by the DB2 program to process the SQL statements encountered while an application is running.

application program interface. The interface through which an application program interacts with a service. An API usually consists of a set of functions or commands.

Application System/400. The IBM Application System/400 workstation, which runs the OS/400 operating system. The AS/400 workstation is classified as a midrange system.

AS/400. Application System/400.

asset management. Identification and distribution of purchased IDS features, services, and tools licensed for use.

Authorized Program Facility. An MVS facility that permits identification of programs authorized to use restricted functions.

bind. In SQL, the process by which the output from the SQL precompiler is converted to a usable structure called an access plan. This process is the one during which access paths to the data are selected and some authorization checking is performed.

CAF. Call attachment facility.

call attachment facility. A DB2 attachment facility for application programs running in TSO or MVS batch. The CAF is an alternative to the DSN command processor and thus allows greater control over the execution environment.

capsule. A tool for building an automated processing sequence using other icons.

CAS. Cooperative Application Services.

cataloged data set. A data set that is represented in an index, or hierarchy of indexes, in the system catalog; the indexes provide the means for locating the data set.

cataloged procedure. A set of control statements placed in a library and retrievable by name.

class of service. In SNA, a designation of the path control network characteristics, such as path security, transmission priority, and bandwidth, that apply to a particular session. The end user designates class of service at session initiation by using a symbolic name that is mapped into a list of virtual routes, any one of which can be selected for the session to provide the requested level of service.

client. A process, such as a program, that requests a service from another program.

CLIST. Command list.

code page. An assignment of graphic characters and control function meanings to all code points; for example, assignment of characters and meanings to 256 code points for an 8-bit code, assignment of characters and meanings to 128 code points for a 7-bit code.

command list. A list of MVS commands and statements designed to perform a specific function for the user under TSO.

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command script. The software interface used for administering and managing a service.

common service area. In the MVS operating system, a part of the common area that contains data areas addressable by all address spaces.

conversation. In Systems Network Architecture (SNA) communications, a connection between two APPC transaction programs (TPs) over an LU-LU session that allows them to communicate with each other.

Cooperative Application Services. A combination of workstation software (a Cooperative Application Services transformer that runs within a capsule), a Cooperative Application Services gateway, and Host Services software running on an MVS or VM host. These three components allow IDS users to execute command scripts (such as those written in REXX) on the host and retrieve the results for further processing on their desktops.

COS. Class of service.

CSA. Common service area.

database administrator. The person who issues administrative instructions to a database service. The DBA defines the data tables used by data access tools, monitors database performance, and assigns user access.

data definition statement. In JCL, a data definition statement that identifies and describes a data set, and specifies the input and output resources needed for the data set.

data set. In the MVS environment, the major unit of data storage and retrieval, consisting of a collection of data in one of several prescribed arrangements and described by control information to which the system has access.

DBA. Database administrator.

distributed facility. A software component composed of parts that physically reside and function on more than one workstation in a network.

Distributed Relational Database Architecture. An IBM architecture that allows SQL data requests between DRDA data sources within a standard protocol. The database becomes a coordinator to SQL requests to other DRDA data sources.

DPF. Desktop Password Facility.

DRDA. Distributed Relational Database Architecture.

DSN command processor. The DB2 component that processes DB2 subcommands such as BIND and RUN.

EBCDIC. Extended binary-coded decimal interchange code. A coded character set consisting of 8-bit coded characters.

ECSA. extended common service area.

ELPA. extended link pack area.

Ethernet. A type of local area network used for IDS connections. An Ethernet network uses a bus topology (that is, all devices are connected to a single cable). An Ethernet network can include any of several kinds of physical transmission media.

EXEC statement. Execute statement.

extended architecture. An extension to System/370 architecture that takes advantage of continuing high performance enhancements to system hardware.

extended common service area. In the MVS operating system, an extension to the common service area, which resides above the 16 MB line.

extended link pack area. In the MVS operating system, an extension to the Link Pack Area, which resides above the 16 MB line.

gateway. A software process that translates protocols and access methods between two dissimilar systems.

gateway identifier. A unique 3-character string, such as GWA or GWB, that identifies a gateway as used in various configuration parameters.

gateway name. The name by which a gateway is known to other components on the local area network (LAN).

gateway service. An IDS facility comprised of one or more gateways of a particular type.

Host Services. The IDS program product residing on a workstation. Host Services provides interface services between IDS on the LAN and the database or CAS application on the host computer.

installation performance specification. In MVS, a set of installation-supplied control information used by the system workload manager. An IPS includes performance

group definitions, performance objectives, and coefficients used to establish the service rate.

in-stream procedure. A set of job control statements placed in the input stream that can be used any number of times during a job by naming the procedure in an execute statement.

internetwork. Two or more local area networks (LANs) interconnected for exchange of data.

I/O. Input/output.

IPL. Initial program load.

IPS. Installation performance specification.

JCL. Job control language.

JES. Job entry subsystem.

job control language. A control language used in an IBM mainframe environment to identify a job to an operating system and to describe the job's requirements.

job entry subsystem. In MVS, a system facility for spooling, job queuing, and managing I/O.

LAN. Local area network.

link library. A partitioned data set from which load modules are fetched when they are referred to in execute (EXEC) statements and in ATTACH, LINK, LOAD, and transfer control (XCTL) macroinstructions.

link pack area. In MVS, an area of main storage containing reenterable routines from system libraries. Their presence in main storage saves loading time.

load balancing. A capability that permits a service to distribute access to resources automatically across individual services grouped into a pool.

local area network. A data communications network, spanning a limited geographical area, in which serial transmission is used for direct communication among workstations or other devices.

local network. The network to which a specified user or resource is directly connected.

log. A collection of messages or other information that is stored for data collection or troubleshooting purposes.

logical unit. In Systems Network Architecture (SNA) communications, a port through which a user or program accesses the SNA network for communication with another user or program.

logical unit 6.2. A set of protocols and services defined by IBM's SNA for communication between application programs.

LPA. Link pack area.

LU. Logical unit.

LU 6.2. Logical unit 6.2.

member. A file within of a partitioned data set.

NAU. Network addressable unit.

NCP. Network Control Program.

network. A set of workstations, servers, and other devices connected together for the interchange of information.

network addressable unit. In SNA, a logical unit. The NAU is the origin or the destination of information transmitted by the path control network.

Network Control Program. An IBM licensed program product that provides communication controller support for single-domain, multiple-domain, and interconnected network capability.

node. In communications, an end point of a communications link or a junction common to two or more links in a network. Nodes can be processors, workstations, or other devices. Nodes can vary in routing and other functional capabilities.

output. The result of data processing.

parallel sessions. In SNA, two or more concurrently active sessions between the same two logical units (LUs) using different pairs of network addresses. Each session can have independent session parameters.

parameter. Data passed by a user to a program to direct or limit processing in some way.

partitioned data set. In MVS, a data set, in direct-access storage, that is divided into files called members, each of which can contain a program, part of a program, or data.

partner logical unit. In Systems Network Architecture (SNA) communications, the remote, corresponding participant in a session in an SNA network.

path. A single logical connection between two points, such as between a Host Service and a LAN service.

path control network. In SNA, the part of the SNA network that includes the data link control and path control layers.

physical unit. In Systems Network Architecture (SNA), a network-addressable unit that manages and monitors the resources of a node.

PLU. Partner logical unit.

pool. A collection of similar gateways that access a single RDBMS or host application to equalize the loads of the pool's member services.

privilege. In SQL, a capability given to a user by the processing of a GRANT statement.

query. A request for data from a database, based on specified conditions.

RACF. Resource access control facility.

RDBMS. Relational database management system.

realm. In IDS networks, a collection of IDS resources that are maintained as a logical group (that is, a group that is determined not by physical boundaries, but by virtue of being associated with one another). A realm must contain at least a Primary File Service and a Directory Service. Other components such as workstations and Data Access Services can be added to form a functional IDS local area network (LAN).

relational data. In a relational database, information that is related to other information and whose relationships can be defined in the form of tables consisting of rows and columns of data.

relational database. A database that is organized and accessed according to relationships between data items. These relationships are expressed as tables related by data values, rather than by pointers or memory locations.

relational database management system. The software that makes it possible to create, use, and maintain relational data in the form of tables consisting of rows and columns of data.

remote network. A network other than the local network, but which is accessible to the local network by some means.

Resource Access Control Facility. An IBM-licensed program that provides for access control by identifying and by verifying the users to the system, authorizing access to protected resources, logging the detected unauthorized attempts to enter the system, and logging the detected accesses to protected resources.

SDSF. System Display and Search Facility.

server. The workstation on which a service runs.

service. A software process that provides facilities to other parts of IDS, such as a file service, a mail service, a mail gateway service, and a database gateway service.

Service Global Data Area. An Extended Common Service Area (ECSA) control block used by IDS Host Services to provide global information about a host service. This includes information such as the TP name for the APPC conversation, the gateway to which the service belongs, and end user connection status. There is one SGDA per host service.

service manager. An MVS Host Services address space that coordinates one or more sets of subsystem services.

service rate. In the system resources manager, a measure of the rate at which system resources (services) are provided to individual jobs. It is used by the installation to specify performance objectives, and used by the workload manager to track the progress of individual jobs. Service is a linear combination of processing unit, I/O, and main storage measures that can be adjusted by the installation.

service request block. An MVS control block used to communicate work requests between different address spaces.

session. A logical connection between two network addressable units (NAUs) that allows communication between the NAUs.

session-level pacing. In SNA, a flow control technique that permits a receiving session to control the data transfer rate (the rate at which it receives request units) on the normal flow. It is used to prevent overloading a receiver with unprocessed requests when the sender can generate requests faster than the receiver can process them.

session limit. (1) In SNA, the maximum number of concurrently active LU-LU sessions that a particular

logical unit (LU) can support. (2) In the network control program, the maximum number of concurrent line-scheduling sessions on a non-SDLC, multipoint line.

session mode name. In SNA, defines certain session characteristics like pacing level and class of service.

SGDA. Service Global Data Area.

SMF. System management facilities.

SNA. Systems Network Architecture.

SQL. Structured Query Language.

SQS. In IDS Host Services, an SQL service identifier.

SRB. Service request block.

SSDA. Subsystem data area.

Structured Query Language. A command language for use with relational databases. The language consists of statements to insert, update, delete, query, and protect data. IDS tools use SQL to communicate with database servers.

subsystem data area. A Host Services for MVS control block that describes each IDS subsystem.

supervisor call. A request that serves as the interface into operating system functions, such as allocating storage. The SVC protects the operating system from inappropriate user entry. All operating system requests must be handled by SVCs.

SVC. Supervisor call.

system administrator. In IDS, the person who is responsible for maintaining and configuring IDS, including its workstations, servers, and network.

System Display and Search Facility. In the MVS and VM environments, a facility that provides current information on the status of jobs, print queues, system resources, and the like.

system management facilities. An optional control program feature of OS/VS that provides the means for gathering and recording information that can be used to evaluate system usage.

Systems Network Architecture. The IBM description of logical structure, formats, protocols, and operational sequences for network configuration, operation, and transmission.

token. In a local area network, the symbol of authority passed successively from one data station to another to indicate the station temporarily in control of the transmission medium. Each data station has an opportunity to acquire and use the token to control the medium. A token is a particular message or bit pattern that signifies permission to transmit.

token-ring network. A network that uses a ring topology, in which tokens are passed in a circuit from node to node. A node that is ready to send can capture the token and insert data for transmission.

tool. An IDS desktop program, such as Text, Reporter, or Query. Every tool is represented by an icon.

TP. Transaction program.

transaction program. A program that uses an APPC application programming interface to communicate with a partner program on a remote node.

transformer. A tool that can be used to perform various types of data manipulation either interactively or in a capsule application.

Virtual Telecommunications Access Method. An IBM program product that controls communications and data flow between nodes and application programs in an SNA network running on a host (ES/9000) system.

VTAM. Virtual Telecommunications Access Method.

workstation. A computer at which the user can use IDS to perform work.

Workstation Tools Data Dictionary. A logical data dictionary that standardizes the IDS desktop view of data across many relational database management systems. The WTDD stores the print names of database items, defines how the items are to be displayed, and includes other logical attributes of data. The WTDD is implemented as a set of standard relational tables that can be managed through the DBA tool.

WTDD. Workstation Tools Data Dictionary.

Bibliography

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Referenced Publications

IBM Communications Manager/2 Configuration Guide, SC31-6171

IBM Communications Manager/2 Configuration Worksheets, SX75-0088

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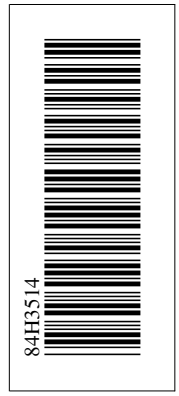

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