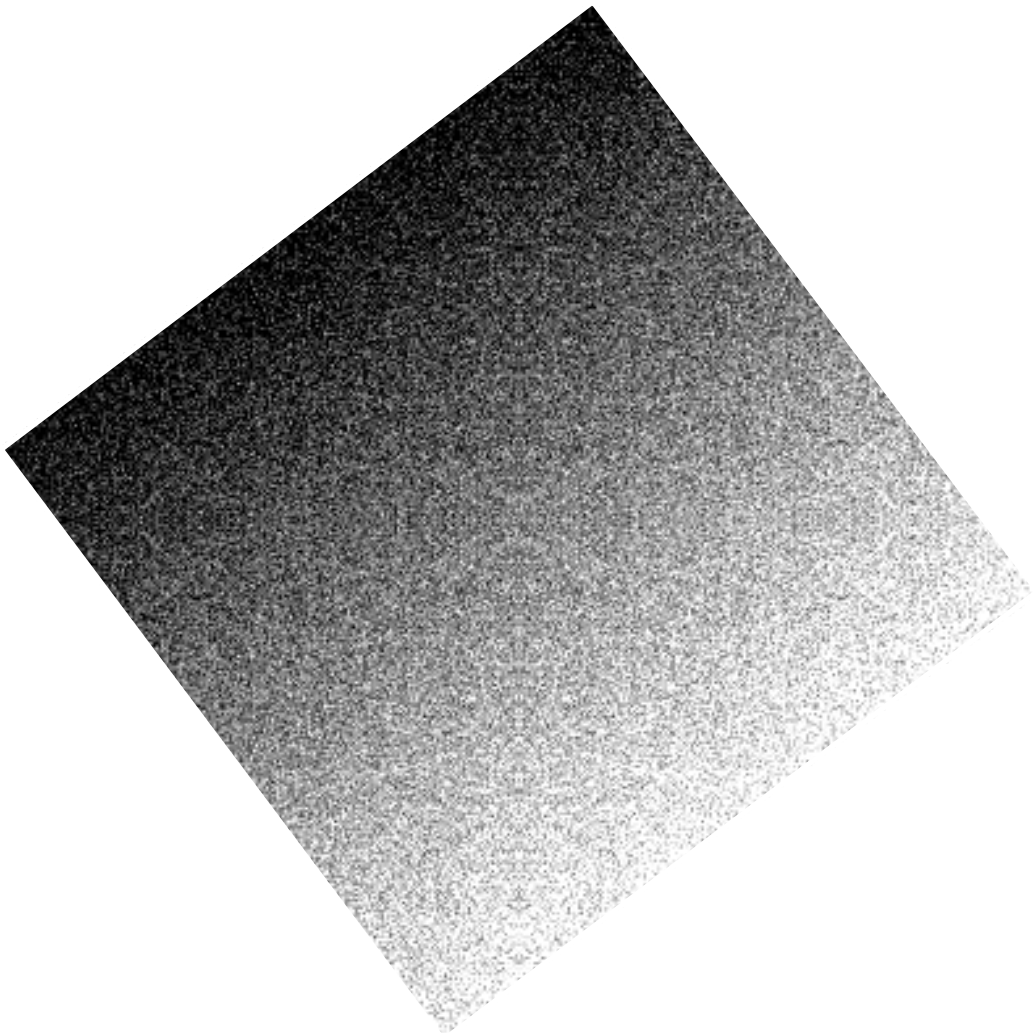
Intelligent Decision Server

IBM

# Planning MVS Host-to-LAN Connectivity

*Version 1*



GC26-8880-00

Intelligent Decision Server

IBM

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*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.

**First Edition (October 1996)**

This edition applies to Version 1 of Intelligent Decision Server, 5639–IDS, and to any subsequent releases until otherwise indicated in new editions or technical newsletters. Make sure you are using the correct edition for the level of the product.

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# Contents


**Notices** . . . . . v
Trademarks . . . . . v

**About This Book** . . . . . vii
Who Should Read This Book . . . . . vii
We'd Like Your Comments . . . . . vii

**Chapter 1. Introducing IDS Host Services** . . . . . 1
Accessing DB2 and CAS Applications from IDS Workstations . . . . . 1
Communications between Data Access Components . . . . . 4
DB2 Data Access Components . . . . . 5
CAS Data Access Components . . . . . 6
SNA APPC Communications between Host and LAN . . . . . 7
Host Services Address Spaces and Their Logical Connections . . . . . 9
Planning Host Services Installation and Configuration Activities . . . . . 12

**Chapter 2. Starting the Planning Process** . . . . . 15
Planning Collectively through Workshops . . . . . 15
Gathering Specialists with the Right Skills . . . . . 16
Assembling the Planning Worksheets . . . . . 18
Hardware Requirements . . . . . 19
Software Requirements . . . . . 20
Storage Requirements . . . . . 20
Disk Space Requirements for Data Sets . . . . . 20
Subsystem Requirements . . . . . 21
Address Space Requirements . . . . . 21
Optional LPA Module Requirements . . . . . 22
Naming Host Services Address Spaces . . . . . 22
Naming Conventions . . . . . 23
JCL for Cataloged Procedures . . . . . 23
VTAM and NCP . . . . . 25
Communications Manager/2 . . . . . 25
Multiple Host Systems or VTAMs . . . . . 26

**Chapter 3. Using the Network Planning Worksheets** . . . . . 28
Host Network Administration Worksheets . . . . . 28
Worksheet A: Host Network Administration . . . . . 29
Worksheet B: Host Network Administration . . . . . 31
Worksheet C: Host Network Administration . . . . . 33
LAN Administration Worksheets . . . . . 34
Worksheet D: LAN Administration . . . . . 35
Worksheet E: LAN Administration . . . . . 37
IDS Administration Worksheet . . . . . 38
Worksheet F: IDS Administration . . . . . 38


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**Chapter 4. Using the MVS Host Planning Worksheets** . . . . . 40
MVS Security Administration Worksheet . . . . . 40
Worksheet G: MVS Security Administration . . . . . 41
MVS Systems Programming Worksheets . . . . . 41
Worksheet H: MVS Systems Programming . . . . . 43
Worksheet I: MVS Systems Programming . . . . . 45
Worksheet J: MVS Systems Programming . . . . . 46
Worksheet K: MVS Systems Programming . . . . . 47
DB2 Administration Worksheets . . . . . 47
Worksheet L: DB2 Administration . . . . . 48
Worksheet M: DB2 Administration . . . . . 49

**Appendix A. Network Planning Worksheet Templates** . . . . . 51

**Appendix B. MVS Host Planning Worksheet Templates** . . . . . 58

**Appendix C. Worksheet Indexes** . . . . . 66

**Glossary** . . . . . 72

**IDS Publications** . . . . . 80

**Index** . . . . . 81

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| DB2 | Operating System/2 | System/360 |
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# About This Book

This book contains worksheets and instructions for planning and coordinating 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 provides worksheets for planning the configuration of communications between Host Services and IBM Communications Manager/2 on the IDS local area network (LAN). Using these planning worksheets allows you to prepare for enabling IDS LAN desktop users to access IBM's DATABASE 2 (DB2) relational database management system (RDBMS); the worksheets also let you prepare for enabling users to access host-resident legacy data and *cooperative applications* through IBM's Cooperative Application Services (CAS) facility.

*Planning MVS Host-to-LAN Connectivity* is designed to be used with the IDS publication *Installing Host Services and Configuring Host-to-LAN Communications for MVS*. This book describes preparing for Host Services installation and configuration at the earliest stages of an IDS installation. It is intended to be used far in advance of any actual Host Services installation activity.

## Who Should Read This Book

*Planning MVS Host-to-LAN Connectivity* describes planning tasks that are part of the duties of a broad range of specialists skilled in many areas of host administration, network communications, and LAN administration. Chapter 2, “Starting the Planning Process” on page 15 describes the intended audience for this material in detail.

## We'd Like Your Comments

Your feedback is important to us in providing you with the most accurate and high-quality information. If you have any comments about this book or any other IDS documentation, please visit our Website at:

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# Chapter 1. Introducing IDS Host Services

Host Services is a software component of the Data Access Services line of IBM Intelligent Decision Server (IDS) software products. Data Access Services encompasses a wide selection of software products that IDS users can combine to gain access to a broad assortment of applications and databases residing on various platforms. The Host Services product is a host-resident program that provides developer's desktop users with internetwork access to a variety of IBM host-based databases and applications.

This book describes how to plan and coordinate the installation and configuration of the Host Services product to support IDS local area network (LAN) desktop access to IBM DATABASE 2 (DB2) relational databases and cooperative applications residing on an MVS host workstation. Access to host components of cooperative applications is accomplished through Host Services and IDS Cooperative Application Services (CAS). This book also describes planning for configuring communications between Host Services and IBM Communications Manager/2, which provides communications services between the host and LAN.

Cooperative Application Services is a distributed IDS facility that allows IDS LAN desktop users to run command scripts that access applications and legacy databases on any MVS host system supported by IDS Host Services.  desktop users can perform powerful and complex analyses available to the host system, using all the data accessible to IDS and host systems. The CAS product is composed of software that resides partially on an MVS host system and partially on workstations attached to an IDS LAN.

Host Services runs in the MVS environment on IBM Enterprise System/9000 (ES/9000) (or equivalent) computers running the Multiple Virtual Storage/Enterprise Systems Architecture (MVS/ESA) operating system.

## Accessing DB2 and CAS Applications from IDS Workstations

IDS provides a uniform graphical user interface and a standard set of software tools to help LAN desktop users access a variety of relational database management systems (RDBMSs), including DB2. The type of RDBMS (DB2 or some other database product) is transparent to the desktop user. The user's view is of a data access tool having direct access to the tables of the database.

IDS also provides a CAS transformer tool to allow LAN desktop users to use command script languages like IBM REXX to run jobs or retrieve data from nearly any application, nonrelational DBMS, or RDBMS on the host system. The range of host-resident software that a CAS transformer and its associated script can invoke is extensive. For example, application developers can create scripts that use flat files, DB2, Query Management Facility (QMF), and C. For more information regarding application development for CAS, see *Developing Applications with Cooperative Application Services*.

This wide access to data and applications residing on the MVS host system is accomplished primarily through three IDS components:

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*Enterprise Tools* software running on IDS LAN workstations

*Database Gateway Service* software residing on an IDS-supported personal workstation attached to an IDS LAN and configured for a specified number of DB2 and CAS *sessions*, or connections, with an MVS host workstation

*Host Services* software running on an MVS host workstation

The IDS OS/2 Database Gateway Service is an intermediary between the MVS host and IDS LAN workstations. One of several types of IDS database gateway services, it resides on a workstation configured to run IBM (OS/2) Version 2.1 or higher. It converts the information flow by repackaging data generated by an IDS LAN desktop from a LAN protocol into a form acceptable by the host system. The database gateway service also converts the information flow for data flowing from the host system to IDS LAN workstations. In addition, the database gateway service establishes access paths to host services. It manages the access paths as a pool and assigns them for use through certain developer's desktop tools, including Query, Reporter, DBA, SQL Entry, Forms Design, and Data Entry. The OS/2 Database Gateway Service can accommodate several types of gateways supporting access to different data sources and running concurrently (for example, DB2, CAS, OS/400 and DB2 for OS/2.

When access to a DB2 database or CAS application is requested by an developer's desktop, the desktop sends the request (for CAS applications, the desktop sends a REXX or command list procedure) to the database gateway service. The database gateway service communicates with the host through IBM Communications Manager/2, which resides on the same workstation as the gateway service. Communications Manager/2 uses the Systems Network Architecture (SNA) Advanced Program-to-Program Communications (APPC) Logical Unit 6.2 (LU 6.2) protocol and is connected to the host through a LAN link or a Synchronous Data Link Control (SDLC) line for remote communications.

The gateway service uses Communications Manager/2 to pass SQL statements, data, or CAS scripts to the appropriate service address space (host service) on the host. For DB2 requests, the receiving SQL service address space then passes the request to the appropriate DB2 subsystem; for CAS applications, the receiving CAS service address space executes the procedure through Time Sharing Option Extensions (TSO/E), invoking the host component of the cooperative application. Figure 1 on page 3 illustrates this flow.

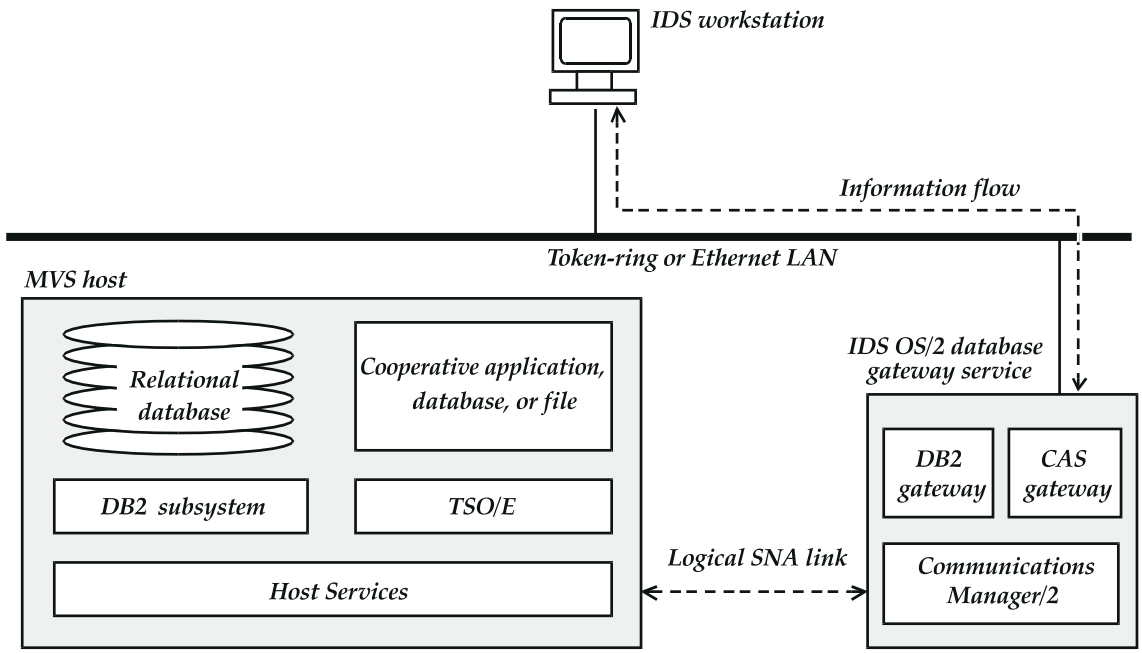


*Figure 1. Access path from developer's desktop to DB2 and/or CAS application*

If your DB2 subsystem provides Distributed Relational Database Architecture (DRDA) requester functions, then IDS data access tools can be configured to access the DRDA servers configured to that subsystem. For example, a developer's desktop user might access a SQL/DS database residing on a remote virtual machine (VM) host system through a DRDA server configured to a DB2 subsystem residing on an MVS host connected to the IDS LAN. With DRDA, IDS data access tools are configured to access the target database, and the secondary access path is transparent to users.

Host Services provides an MVS host interface that lets you administer the various Host Services address spaces and monitor and control sessions between the database gateway service and the host system. Detailed information about using the host interface command facility is provided in *Administering Host Services for MVS: DB2 and Cooperative Application Services*.

The database gateway service provides an interface that allows IDS administrators to enter gateway commands through the IDS SA tool (System Administration tool) from any developer's desktop configured with the appropriate assigned *assets*. The set of gateway commands allows administrators to monitor and control sessions between IDS users' workstations and a host system.

For more information about the database gateway service and using it to manage DB2 and CAS sessions, see *Configuring and Administering Database Gateway Services* and

the *System Administration Guide and Reference*. For information about installing a database gateway service on an IDS LAN, see *Installing IDS LAN Components*.

## Communications between Data Access Components

Developer's desktop tools are designed for direct communications with other LAN-resident services, whereas DB2 is designed for direct access to applications running in MVS address spaces. Similarly, the CAS transformer runs on a developer's desktop, whereas the command script associated with the transformer runs in an MVS address space on the host. The widely distributed nature of these components requires several levels of communication to implement the simple view that the system presents to the developer's desktop user for either type of data access.

The IDS OS/2 Database Gateway Service uses several internal IDS processes common to both DB2 and CAS sessions to manage communications and convert data. Among them is a monitor process to manage allocation of internal gateway processes and resources.

A database gateway service can also use multiple *watchdog* processes, one for each DB2 or CAS gateway configured for the service. A watchdog process maintains APPC conversations with the host for commands and status, and it also manages cancel requests.

Associated with each watchdog process are a number of session processes used to perform data and format conversion. Each open data access tool on the developer's desktop is connected over the LAN to a session process. The session process performs bidirectional conversion between the network protocol and APPC protocol, and restarts the APPC connection if it is interrupted. One session process is active for each DB2 or CAS session between the gateway service and the host system. The number of sessions that each DB2 or CAS gateway is capable of running is determined by the IDS system administrator through the asset management process during installation.

The database gateway service uses Communications Manager/2 residing on the same workstation to establish SNA APPC sessions with Host Services through Virtual Telecommunications Access Method (VTAM). You can choose the actual path between the VTAM address space and the gateway service from the several configurations that SNA allows to handle many possible connecting devices. Figure 2 on page 5 illustrates the SNA connection between Communications Manager/2 and VTAM.

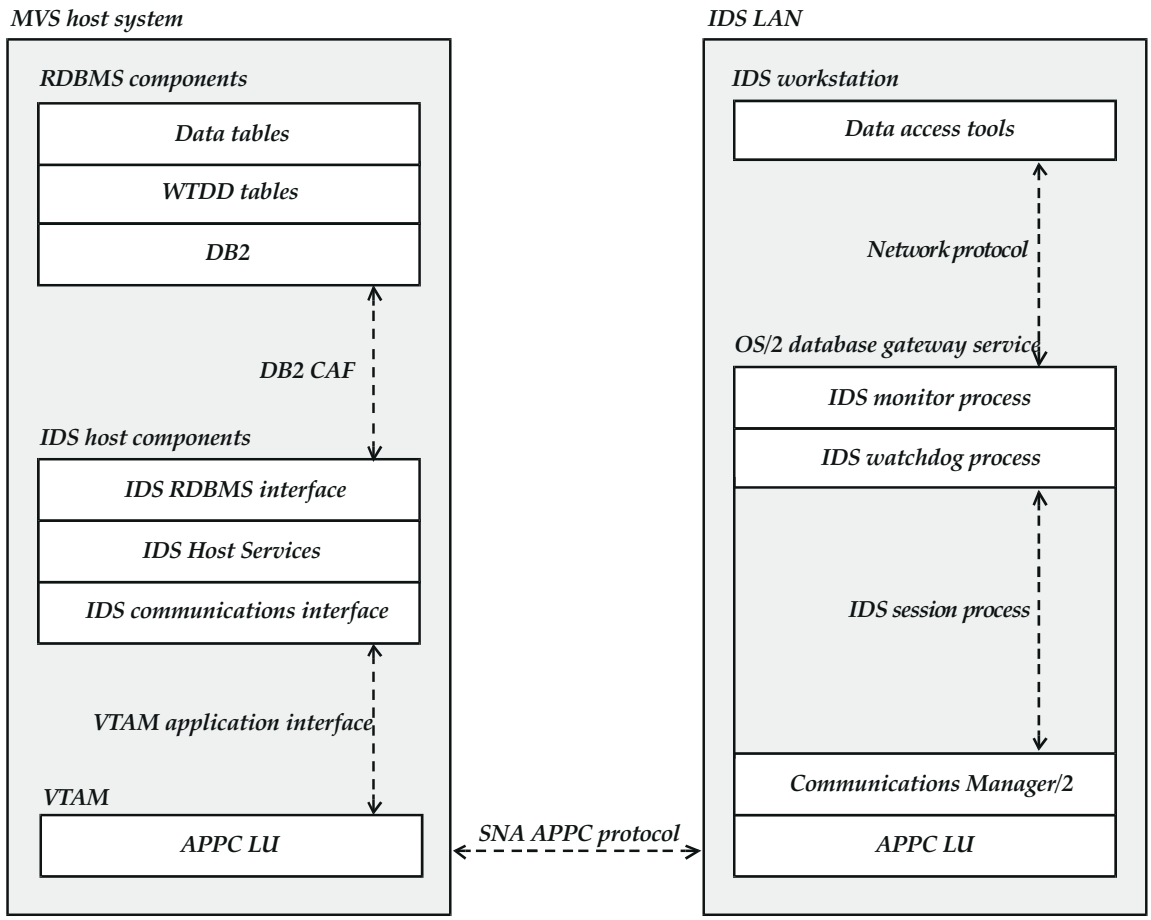


*Figure 2. DB2 data access communications system view*

At the host-system entry point into the SNA network, the IDS communications interface accesses the APPC communications protocol in sending and receiving messages between IDS Host Services and the communications network.

## DB2 Data Access Components

When developer's desktop tools send data and SQL statements to the IDS OS/2 Database Gateway Service, the database gateway service forwards them to the Host Services software and returns the results from Host Services to desktop tools for display or further manipulation. The database gateway service uses a token-ring or Ethernet LAN as the physical medium to communicate directly with data access tools used at IDS workstations. Figure 2 shows the DB2 data access components and their connections.

The Host Services components (called *host services* throughout this publication) reside in various MVS address spaces. The *service manager* component controls, maintains, and provides service administration capabilities for APPC conversations with the

watchdog process in the database gateway service. An *SQL service* component accepts DB2 SQL requests from the database gateway service and forwards them through the IDS RDBMS interface and the DB2 Call Attach Facility (CAF). Each connection between Host Services and DB2 is established through CAF. When the DB2 subsystem returns results, Host Services passes them to the gateway service.

In Figure 2 on page 5, note the presence of the *Workstation Tools Data Dictionary (WTDD)* as a set of DB2 tables. The WTDD defines links between the data definitions in the logical database that the developer's desktop tools see and the actual data stored in the physical database. The data access tools use the WTDD to translate commands and data between the logical database and the physical database. See *Administering Databases with IDS* for a more detailed description of the WTDD.

## CAS Data Access Components

When a CAS transformer sends data and REXX or CLIST procedures to the database gateway service from an IDS capsule application running on a desktop, the database gateway service forwards them to the Host Services software on the MVS host system. The procedures invoke programs on the host system, and they read and write host files according to REXX or CLIST commands executed through TSO/E. Figure 3 on page 7 shows the various CAS data access components and their connections.

The CAS host services reside in MVS address spaces. A CAS service invokes TSO/E to run the REXX or CLIST procedure supplied by the desktop. The CAS services share the same service manager with SQL services if SQL services are present. The service manager controls, maintains, and provides service administration capabilities for APPC conversations with the watchdog process in the database gateway service.

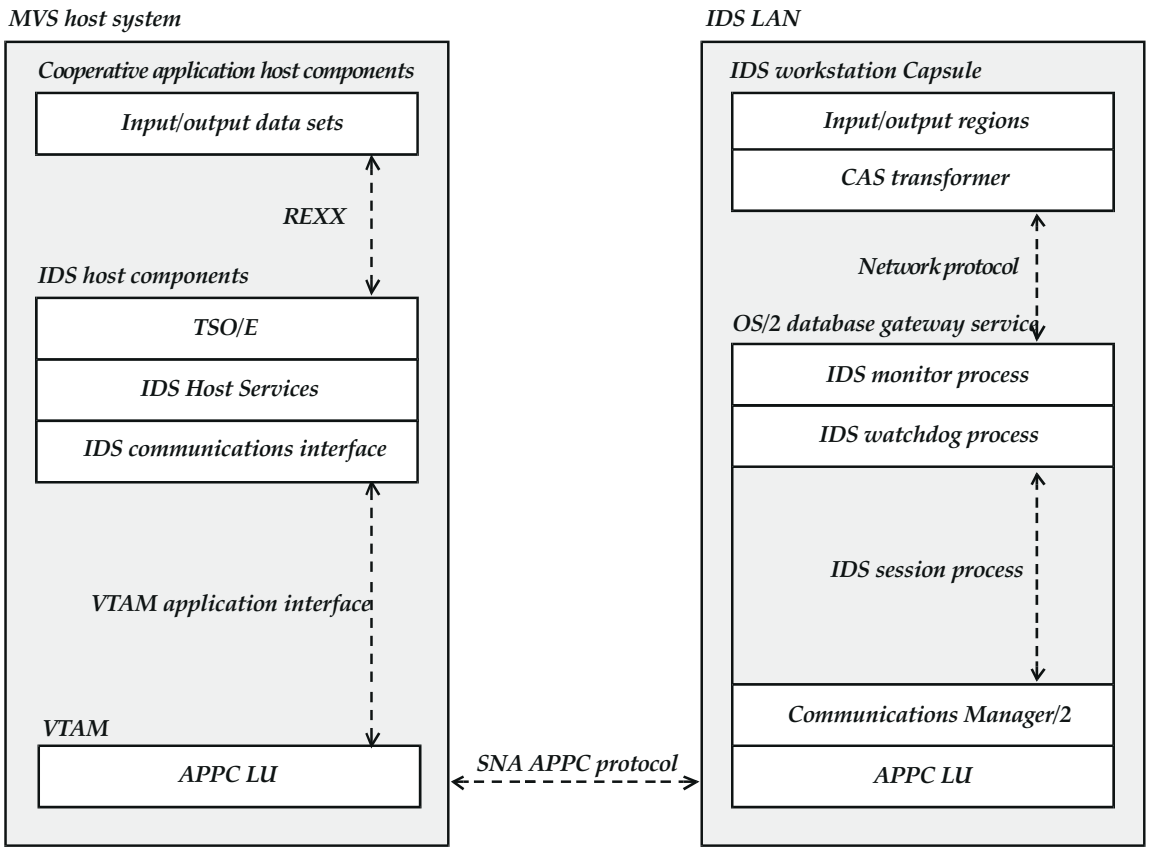


*Figure 3. CAS communications system view*

The REXX or CLIST procedures forwarded to Host Services address spaces invoke cooperative application programs on the host and read and write host files according to REXX or CLIST commands executed through TSO/E. A REXX procedure can return results to desktop tools from the host system for display or further manipulation. A CLIST procedure must call a REXX procedure to return similar results from the host.

## SNA APPC Communications between Host and LAN

The IDS OS/2 Database Gateway Service communicates with the host through IBM Communications Manager/2, which resides on the same workstation as the database gateway service. Communications Manager/2 uses the SNA APPC LU 6.2 protocol and is connected to the host through a LAN link or an SDLC line for remote communications. In this topology, Communications Manager/2 participates directly as an SNA network *node*. In an SNA network, nodes are physical processors that are connected by physical data links.

At the center of the SNA communications are *transaction programs* (TPs) on the host system and on the LAN. TPs are application programs that help users access resources in the network. Each TP runs within a particular *logical unit* (LU).

An LU is an addressable, logical processor within an SNA-defined network that lets a user gain access to network resources and communicate with other users. LU 6.2 is a particular type of SNA logical unit. LU 6.2 provides a connection between its users and network resources (TPs). The protocol that LU 6.2 provides is called Advanced Program-to-Program Communications (APPC). A TP uses the services provided by its LU to communicate with other TPs by issuing TP verbs (APPC functions). Figure 2 on page 5 and Figure 3 on page 7 show the APPC LUs that provide entry points into the SNA network for DB2 and CAS data access sessions.

The logical SNA connections between LUs are called *sessions*. Sessions can be compared to phone lines through which data flows between the LUs. An LU 6.2 can support more than one session concurrently with the same partner LU. Such sessions are called parallel sessions. An LU 6.2 can support sessions with multiple LUs.

While LUs are logically connected by sessions, TPs are logically connected by conversations. LU 6.2 treats a session as a reusable connection between two TPs. One session can support only one conversation at a time, but one session can support many conversations in sequence. TPs view only the conversation between them and are isolated from the underlying session that supports the conversation. A conversation uses an LU-to-LU session as a resource only for the duration of the conversation. After an LU-to-LU session has connected two Type 6.2 LUs, it remains active until a network operator or system process terminates it.

LU 6.2 does not allow an unlimited number of sessions between a pair of parallel-session capable LUs. Session limits are imposed on the number of total sessions LUs can have between them. A defined session limit also limits the number of conversations that can be active. If there are ten sessions, for example, then there can only be ten concurrent active conversations.

To establish a conversation, a TP specifies the name of the remote LU, the name of the TP, the session mode name (that identifies certain session characteristics like pacing levels and class of service), and security parameters. The LU name specified by the TP is a network addressable unit (NAU) that is used to route the connection within the SNA network.

If a session with the characteristics of the specified mode name exists between the two LUs, and the session is not being used for another conversation, the LUs assign that session to the new conversation for its use. If a session is not available, the LU starts a new session using the specified mode name. The new session is then used for the conversation.

After the conversation is initiated, the two TPs use LU 6.2 verb functions to send and receive data as necessary to accomplish the transaction. When the transaction is finished, one TP ends the conversation. That session is now available for another conversation between TPs using the session's LUs as entry points into the SNA network.

## Host Services Address Spaces and Their Logical Connections

An *address space* is a range of virtual storage addresses created and maintained by the MVS operating system for data and program residence and for program execution. Host Services address spaces and DB2 address spaces run in the same MVS system. Host Services uses three types of address spaces for managing DB2 and CAS processes and for maintaining communications with the database gateway service:

SQL service address spaces

CAS service address spaces

Service manager address space

### SQL Service Address Spaces

Host Services uses one SQL service address space for each connection to DB2 (each DB2 session). SQL services and DB2 operate in separate address spaces. The MVS host must have a separate set of service address spaces for each DB2 gateway, of which there can be several configured for a particular database gateway service.

Each SQL service address space forwards database requests to DB2 and returns results from DB2 on behalf of a single instance of desktop tool use. Therefore, the number of service address spaces that you create in configuring Host Services for DB2 access directly limits the number of concurrent openings of data access tools configured to access DB2 on the IDS LAN.

Figure 4 on page 10 shows the communications path into a service address space. The database gateway service sends SQL statements and data to the service address space and receives data results on a single path, labeled *Commands and data* in Figure 4 on page 10.

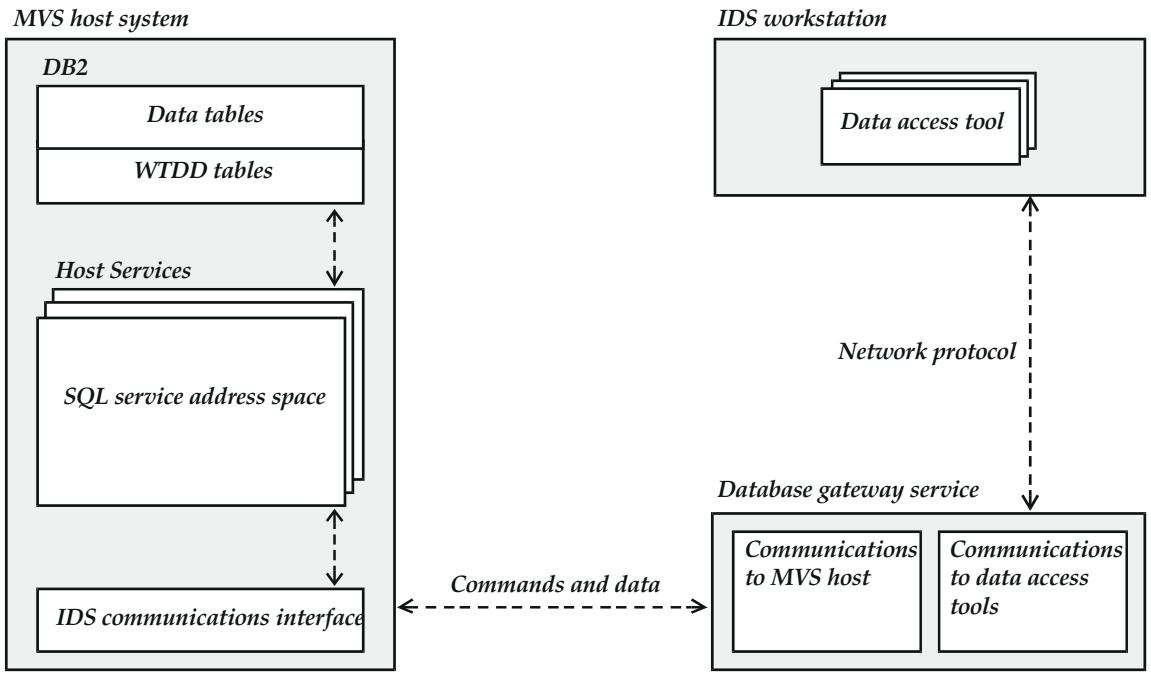


*Figure 4. SQL service address space communications*

The SQL service address space creates a CAF connection with DB2 when an icon is opened on the developer's desktop. The DB2 interface software in the service address space opens a thread for this connection when a desktop's CONNECT request is processed or an SQL logical unit of work begins, depending on your configuration.

## CAS Service Address Spaces

Host Services uses one CAS service address space for each connection to a CAS transformer (each CAS session). Each CAS service runs in a CAS service address space and invokes TSO/E to run the REXX or CLIST procedure supplied by the desktop. TSO/E and the REXX or CLIST procedure both execute in the same CAS service address space. The number of CAS service address spaces that you create when configuring Host Services directly limits the number of concurrent openings of CAS transformers on the IDS LAN.

Figure 5 on page 11 shows the communications path into a CAS service address space. The database gateway service exchanges data with the service address space through the IDS communications interface on a single path, labeled *Data* in Figure 5 on page 11

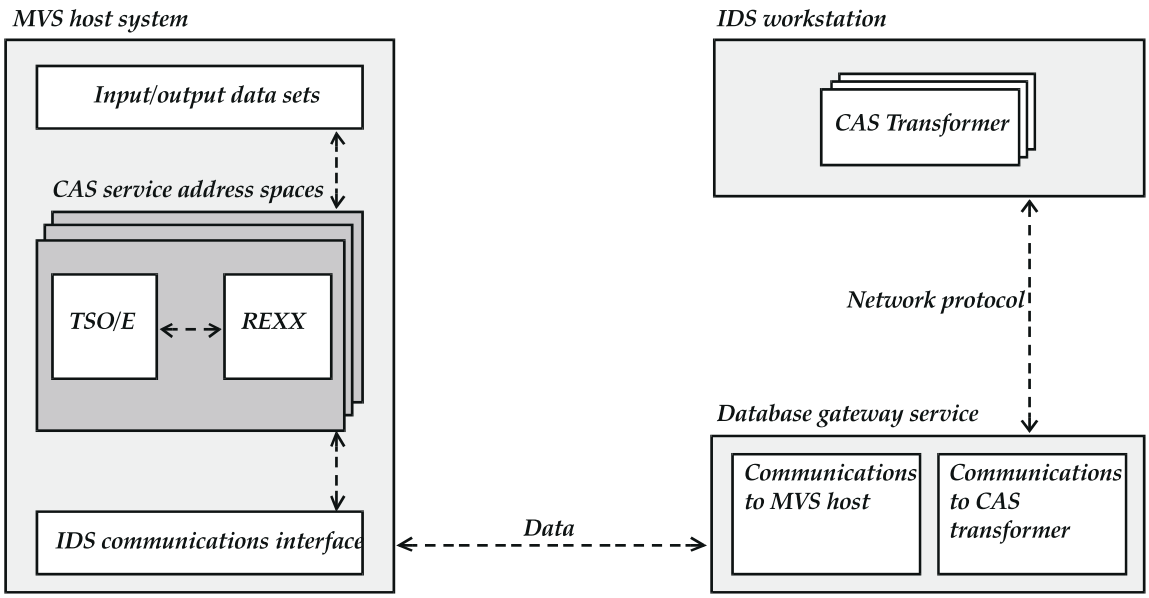


*Figure 5. CAS service address space communications*

## Service Manager Address Space

Host Services also uses a single service manager address space to control the individual service address spaces. The MVS host must have a separate set of service address spaces for each gateway, but any number of gateways can share a single service manager address space. The Host Services subsystem provides an interface for operations.

Figure 6 on page 12 shows two logical APPC communications paths, labeled *Host-to-gateway* and *Gateway-to-host*, between the service manager address space and each gateway. The gateway-to-host path carries commands from the gateway to the service manager, including commands to start or stop service address spaces. The gateway-to-host path also carries cancel requests to service address spaces through the service manager. The service manager uses the host-to-gateway path to report certain aspects of service address space status to the gateway, and to request selected functions for the gateway to perform.

There is no APPC path between the service manager and service address spaces; the Host Services subsystem schedules MVS service request blocks (SRBs) to carry operator commands issued from the host interface to the service manager, and to carry service address space logging messages from service address spaces to the service manager. While logging messages are passed across address spaces, tracing messages stay local to their service address spaces and are not passed to the service manager.

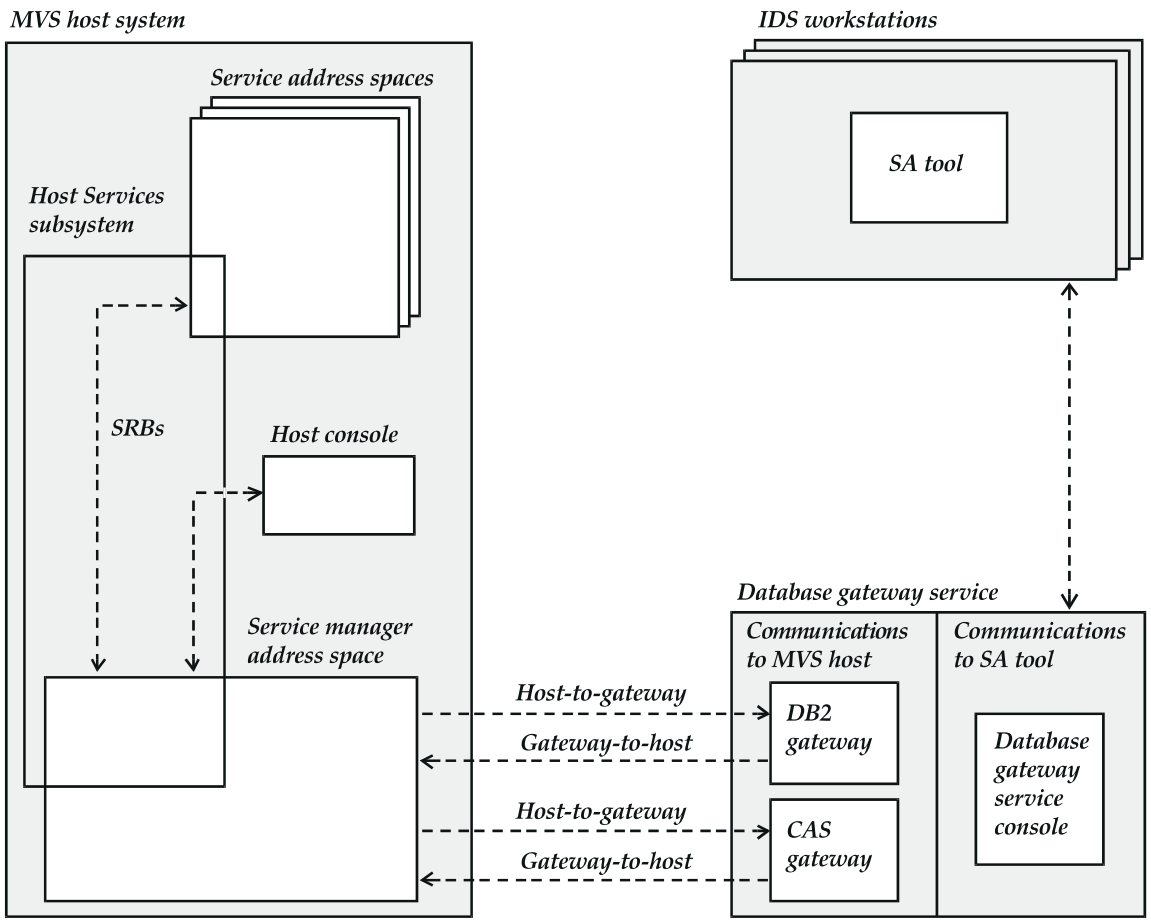


*Figure 6. Service manager address space for administrative communications*

Notice in Figure 6 that the database gateway service provides an interface that allows an IDS system administrator to enter gateway commands for the service manager with the SA tool. The IDS system administrator can use the SA tool from any developer's desktop, including the database gateway service machine if that workstation has also been configured as a developer's desktop.

## Planning Host Services Installation and Configuration Activities

Planning for Host Services installation and configuration must be completed before you attempt to actually install and configure Host Services. This book contains 13 worksheets that are designed to help you plan and coordinate the information required for Host Services installation and configuration. Using the worksheets can help you coordinate configuration planning among several individuals with responsibilities for several critical system areas, primarily VTAM administration on the host and LAN administration

on the IDS local area network. The planning worksheets are briefly described in Table 1 on page 13 and Table 2 on page 14.

Table 1 describes six planning worksheets used to coordinate naming conventions to be applied across the internetwork for the following three areas of network administration:

Host network administration

LAN administration

IDS administration

Each worksheet applies to a particular set of naming conventions for one of these three areas of network administration. Each worksheet is identified by a unique letter ID (A-F).

*Table 1. Network Planning Worksheets*

| ID | Title | Description |
|---|---|---|
| A | Host Network Administration | This worksheet is for the VTAM specialist to coordinate and define naming conventions for the following configuration points on the MVS host system that will run Host Services. |
| B | Host Network Administration | This worksheet is for the VTAM specialist to coordinate and define naming conventions for configuration points on the host system that will own the Communications Manager/2 program used by the gateway service. Note that in a cross-domain environment, this will not necessarily be the MVS host system on which Host Services will run. |
| C | Host Network Administration | This worksheet is for the VTAM specialist to coordinate and define naming conventions for data access configuration points on the MVS host system that will run Host Services. |
| D | LAN Administration | This worksheet is for the LAN administrator to coordinate and define naming conventions for each personal computer that will run database gateway services and be logically owned by a host system. The host system is the VTAM host that owns Communications Manager/2; it is not necessarily the MVS host that runs Host Services. |
| E | LAN Administration | This worksheet is for the LAN administrator to coordinate and define naming conventions for configuration points for each IDS gateway that will communicate with the VTAM host. |
| F | IDS Administration | This worksheet is for the IDS administrator to coordinate and define naming conventions for configuration points for each IDS gateway that will communicate with the MVS host system. |

For detailed information about using the set of network planning worksheets, see Chapter 3, “Using the Network Planning Worksheets” on page 28.

Table 2 on page 14 describes seven planning worksheets used to coordinate naming conventions to be applied to the following three areas of MVS host administration:

MVS security administration

MVS systems programming

DB2 administration

Each worksheet applies to a particular set of naming conventions for one of these three areas of MVS host administration. Each worksheet is identified by a unique letter ID (G-M).

*Table 2. MVS Host Planning Worksheets*

| ID | Title | Description |
|---|---|---|
| G | MVS Security Administration | This worksheet is for the MVS security administrator to coordinate and define naming conventions for configuration points on the MVS host system that will run Host Services. |
| H | MVS Systems Programming | This worksheet is for the MVS systems programmer to coordinate and define naming conventions for MVS configuration points on the host system that will run Host Services. |
| I | MVS Systems Programming | This worksheet is for the MVS systems programmer to coordinate and define naming conventions for data access configuration points on the MVS host system that will run Host Services. |
| J | MVS Systems Programming | This worksheet is for the MVS systems programmer to coordinate and define naming conventions for configuration points on the MVS host system that will run Cooperative Application Services. |
| K | MVS Systems Programming | This worksheet is for the MVS systems programmer to coordinate and define naming conventions for Host Services configuration points on the MVS host system that will run DB2. |
| L | DB2 Administration | This worksheet is for the DB2 database administrator to coordinate and define parameters that describe the DB2 environment to IDS Host Services. The parameters require naming conventions for global information on the MVS host system that will run DB2. |
| M | DB2 Administration | This worksheet provides the DB2 database administrator with information necessary to create a Workstation Tools Data Dictionary (WTDD) in the specified DB2 subsystem. |

For detailed information about using the set of MVS host planning worksheets, see Chapter 4, “Using the MVS Host Planning Worksheets” on page 40.

After the planning process is complete, you can locate information regarding installation of Host Services and configuration of host-to-LAN communications in *Installing Host Services and Configuring Host-to-LAN Communications for MVS.*

# Chapter 2. Starting the Planning Process

Installing IDS Host Services and configuring communications between the MVS host and the database gateway service on the IDS LAN requires that dozens of parameters for many interrelated software components be precisely coordinated. Successful completion of an initial IDS installation can be difficult due to the variety of interrelated software and hardware products involved (of which IDS is just a part), and the large volume and complexity of the configuration items. A single error made during configuration can easily result in a system that is inoperable. More troublesome problems can be created by configuration errors that initially go unnoticed but result in intermittent system failures that can be difficult to isolate and correct.

In some cases, you might have to initially install IDS in a configuration that is not intended to support a production load. A migration from a working configuration to a more complex configuration is usually easier than attempting a full-scale installation, because only a few components must be reconfigured to accomplish the migration, and the sources of potential error are limited. In any event, installing and configuring IDS for an MVS host environment requires careful planning.

## Planning Collectively through Workshops

Designing complex networking environments requires extensive detailed planning and expert advice. Internetwork connections are key components in the overall design of any communications network and must be given careful consideration to ensure successful and efficient communications.

A successful installation typically requires coordination between several individuals, some of whom might never have worked together before. IBM recommends that you incorporate a full-system design review during the design phase of your network implementation. To enable the installation and configuration process to proceed quickly and effectively, IBM recommends that the design review sessions, or planning "workshops," be conducted by your organization well in advance of the actual installation.

The planning workshops should include all the key personnel in your organization who will be involved in the configuration process as decision makers. Planning workshops allow the appropriate systems experts and administrators to share important information and plan an installation strategy that coordinates all areas of the network that require configuration. The planning worksheets presented later in this manual are designed to assist your group in implementing a workshop process.

Conducting the planning workshops could be a collective responsibility, but the design process will proceed more effectively if one or two individuals in your organization assume the responsibility for leading and coordinating the planning effort. If you do not have the appropriate expertise within your organization to conduct a detailed design review, your IBM representative can help to arrange a design review and recommend additional planning services that will meet your planning requirements.

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## Gathering Specialists with the Right Skills

A variety of skills are required to ensure success of the host-to-LAN communications configuration process. Some participants will have more experience and possess a broader technical knowledge base than others. Unless you have a very small network, it is unlikely that any individual will be able to provide all the answers needed to develop a comprehensive IDS network design.

You can find guidelines for planning internetwork links and designing IDS LANs for internetwork connections where bridges and routers are appropriate in the network topology in *Planning for Connectivity Between IDS LANs*. Skills required for planning IDS LAN-to-LAN connectivity include:

IDS system administration

IDS system administration involves the installation, maintenance, and administration of IDS. It normally also includes planning IDS LAN expansion.

LAN administration

LAN administration encompasses monitoring the performance of LAN components and overseeing all products (not limited to IDS) installed on the LAN.

Network troubleshooting

Network troubleshooting involves determining problems and isolating faults. It requires the ability to take network traces of several different protocols, knowledge of local network functions and, in some cases, LAN/WAN and enterprise-wide network topology.

Technical knowledge of personal computers and OS/2

Familiarity with the operation of personal computers and OS/2 includes knowledge of technical requirements for running IDS, the ability to isolate problems with configurations, and the ability to troubleshoot malfunctioning units.

Network management and performance tuning

Network management involves monitoring network performance and tuning the network in planning for LAN expansion. This function also often includes the overseeing of the entire site installation and ensuring its uninterrupted operation.

Because job descriptions and responsibilities vary from one enterprise to another, the skills necessary for planning networks might be distributed among participants in different ways.

For host-to-LAN connectivity through APPC connections, these additional skills are required:

IDS host administration

IDS administration on the host workstation involves monitoring and managing IDS utilization of MVS resources. It is a specialized function usually requiring systems programming skills, but is sometimes combined with management and configuration of DB2 resources.

Security administration

Security administration encompasses management of security issues for the overall host environment and setting standards for, if not controlling, access to stored data.

Data center planning

Management of a data center involves short- and long-range planning of hardware and software installation and expansion. It is often combined with the overseeing overall operation and day-to-day activities.

Communications management for mainframe systems

Management of communications requires knowledge of VTAM, Network Control Program (NCP), and job entry subsystem (JES) .

Systems programming

Systems programming requires knowledge of MVS operating systems. It involves keeping the host system up and managing resources, as well as tuning and monitoring performance.

Database management

Database management requires knowledge of DB2. It includes managing resources associated with data access and monitoring database performance.

Completing the 13 planning worksheets provided in this manual requires assembling information across the various areas of the internetwork. The responsibility for completing each worksheet should be given to the individual in the organization who possesses the appropriate skills in the subjects covered by each worksheet. Each worksheet is labeled with a brief descriptive title to help you match each worksheet with the appropriate individual. Some worksheets are labeled with the same title; therefore, some individuals will have responsibility for several worksheets. Six major areas of responsibility are identified:

DB2 database administrator

IDS administrator

IDS LAN administrator

MVS security administrator

MVS systems programmer/specialist

VTAM specialist

If several people in your organization share responsibility for any one of the areas described by these titles, it is important that the responsibility for completing a particular worksheet be clearly defined as being shared or assigned to a specific individual.

The worksheets assigned to each of the six areas of responsibility are shown in Table 3 on page 19.

## Assembling the Planning Worksheets

This publication contains 13 worksheets that are designed to be used as aids during the host-to-LAN configuration planning process. The worksheets are intended for use during the planning workshops to help the group decide upon and record naming conventions and similar information that must be coordinated prior to the installation of IDS Host Services.

You can make multiple photocopies of the blank worksheets located in the appendixes, and distribute these to the workshop participants as required. After the worksheets have been completed, copied, and distributed to the appropriate individuals, they can be used as source documents for the installation and configuration process.

Appendix A, "Network Planning Worksheet Templates" on page 51, contains worksheets designed to help coordinate network configuration planning among several individuals with responsibilities for several critical system areas, primarily VTAM administration on the host and LAN administration on the IDS local area network. See Chapter 3, "Using the Network Planning Worksheets" on page 28, for detailed instructions that describe how to comlete the network planning worksheets.

Appendix B, "MVS Host Planning Worksheet Templates" on page 58, contains worksheets designed to help coordinate configuration planning among individuals with responsibilities for several critical MVS system areas:

- MVS security
- MVS system programming
- DB2 database administration

See Chapter 4, "Using the MVS Host Planning Worksheets" on page 40, for detailed instructions that describe how to complete the MVS host planning worksheets.

Table 3 on page 19 lists all of the worksheets used in the planning process, and also shows the technical area of responsibility assigned to each worksheet.

*Table 3. Worksheet responsibilities, sorted by worksheet*

| Worksheet ID and Title | Responsible person |
|---|---|
| A - Host Network Administration | VTAM specialist |
| B - Host Network Administration | VTAM specialist |
| C - Host Network Administration | VTAM specialist |
| D - LAN Administration | IDS LAN administrator |
| E - LAN Administration | IDS LAN administrator |
| F - IDS Administration | IDS administrator |
| G - MVS Security Administration | MVS Security administrator |
| H - MVS Systems Programming | MVS systems programmer/specialist |
| I - MVS Systems Programming | MVS systems programmer/specialist |
| J - MVS Systems Programming | MVS systems programmer/specialist |
| K - MVS Systems Programming | MVS systems programmer/specialist |
| L - DB2 Administration | DB2 database administrator |
| M - DB2 Administration | DB2 database administrator |

The planning workshop leader should review all the worksheets and coordinate their distribution among the workshop participants according to the special skills of the participants. The workshop leader should also read the worksheet instructions contained in Chapters 3 and 4 to become familiar with the requirements of the planning process. During the planning workshops, instructions in Chapters 3 and 4 should be made available to the appropriate individuals based on their information needs.

## Hardware Requirements

Host Services runs in the MVS environment on IBM ES/9000 (or equivalent) computers running the MVS/ESA operating system. The system must have enough processing, main storage, and auxiliary storage resources to run IDS applications.

As with most MVS applications, it can be difficult to state storage requirements precisely. During Host Services configuration, you will specify a value for the *MAXSERVICES* parameter in the Control member (*METCNTRL*) of the sample configuration data set (met.*CONFIG*) distributed with the Host Services software. *MAXSERVICES* specifies the maximum number of service address spaces that the service manager can start. Your system should have enough main and auxiliary storage for *MAXSERVICES + 1* address spaces, in addition to non-IDS address spaces. The additional address space is for the service manager address space.

For more information about the*MAXSERVICES* parameter and other configuration parameters in the Control member of the sample configuration data set, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

## Software Requirements

To work with IDS, an MVS host workstation requires the following minimum software release levels:

IDS MVS Gateway Version 1

MVS/ESA Version 4 Release 2 operating system

DB2 relational database management system, Version 2 Release 3 (for SQL host services only)

TSO Extensions (TSO/E) (5685-025), Version 2 Release 1 (for CAS host services only)

Advanced Communications Function for VTAM (ACF/VTAM) (5664-280), Version 3 Release 3

If used, Network Control Program (NCP) level supported by the Communications Manager/2 residing with the IDS OS/2 Database Gateway Service:

- Version 4 Release 3 (for use with PU 2.1 nodes and Model 3725 front-end processors)
- Version 5 Release 2 (for use with PU 2.1 nodes and Model 3745 or 3720 front-end processors)

NCP is required only if Communications Manager/2 is attached to the host through a 37*xx* communications controller. A 3174-attached Communications Manager/2 does not require NCP.

## Storage Requirements

This section describes storage requirements for:

disk space

subsystem

address spaces

optional link pack area (LPA) modules

## Disk Space Requirements for Data Sets

The distribution data sets require disk space as listed in Table 4 on page 21.

*Table 4. Host Services data set sizes*

| Disk data set name | Block size | No. of blocks | No. of 3380 tracks |
|---|---|---|---|
| MET.JCL | 3120 | 80 | 7 |
| MET.LOAD | 13030 | 120 | 68 |
| MET.LPALIB | 13030 | 3 | 2 |
| MET.AUTHLIB | 13030 | 3 | 1 |
| MET.RUNTIME | 13030 | 170 | 28 |
| MET.DBRMLIB | 3120 | 9 | 1 |
| MET.CONFIG | 3120 | 9 | 1 |
| MET.MVSENU | 23476 | 4 | 1 |
| MET.SAMPLIB | 3120 | 110 | 10 |
| MET.MACLIB | 3120 | 60 | 4 |
| MET.SQLMACRO | 6160 | 42 | 7 |
| MET.REXXLIB | 3120 | 55 | 4 |
| MET.CHKPOINT | 6144 | 2 | 1 |

## Subsystem Requirements

The Host Services subsystem functional routines (modules METSSFR, METSVC, METCNCTX, and METSQLX) require approximately 14.2 kilobytes of storage in the extended pageable link pack area (ELPA).

In addition, the subsystem allocates a number of control blocks in the extended common service area (ECSA). The total allocations are reported in the Host Services Interval Status Report. Requirements are approximately 10 kilobytes for the Host Services subsystem, with an additional 80 bytes per Host Services address space.

These ECSA allocations are only the explicitly allocated ones. Other MVS facilities, such as VTAM, JES, and DB2, also allocate control blocks in common areas on behalf of the Host Services address spaces.

## Address Space Requirements

The Host Services address spaces run with the following REGION parameters:

| | |
|---|---|
| Service manager | 500 KB |
| CAS service | 2048 KB |
| SQL DB2 service | 600 KB |

All other virtual storage is acquired from the extended areas above the 16-megabyte line. All programs are re-entrant and are link-edited with *AMODE* set to *31* and *RMODE* set to *ANY*.

A CAS service might require a larger region size depending on the applications that are run by the service.

## Optional LPA Module Requirements

The following modules are recommended to be loaded into the extended pageable link pack area (ELPA):

| | | |
|---|---|---|
| METSQS | 484 KB | is the SQL service executable module. |
| METCAS | 487 KB | is the CAS executable module. |
| METCAAPI | 2.5 KB | is the Application Program Interface (API) module. |
| METFCLOS | | is an alias for METCAAPI. |
| METFGET | | is an alias for METCAAPI. |
| METFOPEN | | is an alias for METCAAPI. |
| METFPUT | | is an alias for METCAAPI. |
| METMDSP | | is an alias for METCAAPI. |
| METMGET | | is an alias for METCAAPI. |

The following C transient library routines can optionally be loaded into the link pack area (LPA):

| | |
|---|---|
| LSCARGP | 11 KB |
| LSCDIND | 17 KB |
| LSCDMGR | 6 KB |
| LSCOSEQ | 12 KB |
| LSCOTERM | 14 KB |
| LSCSIO | 42 KB |

## Naming Host Services Address Spaces

While installing IDS software, you define and name the following two types of Host Services address spaces:

Service manager address space (one per Host Services subsystem)

Service address spaces (one for each connection to DB2 or a cooperative application)

MVS and Host Services operator commands use these names to control the address spaces (as demonstrated in the MVS CANCEL SQGWA001 command or IDS ! STOP SQGWA001 command, for example).

The name of the service manager address space is the same as the Host Services subsystem name. All sample configuration members and all examples in this manual use *METP*. You specify the name of the service manager address space and its cataloged procedure name during configuration. IDS allows you to have one or more Host

Services subsystems and requires a service manager address space for each Host Services subsystem.

All Host Services address spaces belonging to a specific gateway use the same cataloged procedure name, such as *METSQS*. You specify the cataloged procedure name during configuration. More than one gateway can use the same cataloged procedure. The names of Host Services address spaces each have the following format:

ppgggnnn

where:

*pp* is a 2-character prefix that you specify in the service manager configuration file. The prefix *SQ* is required for SQL host services (for DB2 access); the prefix *CA* is required for CAS host services.

*ggg* is the gateway identifier, also specified in the service manager configuration file, indicating the gateway associated with the address space. All examples and discussions in the IDS library assume that the DB2 gateway identifier is *GWA* and that the CAS gateway identifier is*GWB*.

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

The following example demonstrates an appropriate method for naming address spaces. Assume that you want to have Host Services support a maximum of eight concurrent desktop-to-DB2 sessions, and that you also want to use the sample gateway identifier. The Host Services address spaces would be named *SQGWA001*, *SQGWA002*, and so forth, through *SQGWA008*. For a CAS gateway, the Host Services address spaces might be named *CAGWB001* through *CAGWB008*.

## Naming Conventions

Configuring Host Services and Communications Manager/2 to communicate requires that you assign several names and network addresses. The sample configuration files supplied with IDS include realistic names and addresses, which you can use unchanged if they do not conflict with other elements of your existing configuration. If your site already has naming conventions defined and in use, you can change the sample names and addresses to fit your conventions.

## JCL for Cataloged Procedures

Host Services for MVS address space data set resources are specified by JCL contained in cataloged procedures. A sample service manager address space procedure (METCNTRL), SQL service address space procedure (METSQS), and CAS service address space procedure (METCAS) are provided in met.JCL. The JCL data definition (DD) statements used in these procedures are listed and described in Table 5 on page 24.

*Table 5 (Page 1 of 2). Cataloged procedure DD statements*

| Statement | Description |
|---|---|
| CTRANS | The data set allocated by this DD statement contains the C runtime library. This data set is required for all Host Services procedures. |
| DSNxxx | These DD statements are used only by an SQL service address space. A DB2 version number replaces *xxx* : for example, *DSN310* would be used for DB2 Version 3.1. The DD statement specifies the *DSNLOAD* library to be used when accessing a DB2 subsystem of that version. The *DSNLOAD* library can be concatenated to the *STEPLIB* DD statement if all DB2 subsystems are at the same DB2 version. In this case the *DSNxxx* DD statements are not required. |
| ENUMSGS | This DD statement is used only by the service manager address space procedure. It is a library that contains text for the Host Services messages. |
| METCASIN | This DD statement is used only by the CAS service procedures. It creates a temporary partitioned data set with a member called *METCASRX*. When a script is uploaded from the workstation to the host, the script is written to this member in preparation for execution of the script. The partitioned data set is also concatenated to the *SYSPROC*DD statement so that it can be executed through usual methods. The *DCB* attributes of this data set must correspond with those of the *SYSPROC* concatenation. This data set is deleted by the JCL when the CAS service address space terminates. |
| SQLMACRO | This DD statement is used only by the SQL service procedures. The library contains SQL statements and control logic for building the Workstation Tools Data Dictionary (WTDD). These macros are run by the IDS *SQLMACRO* command. |
| STEPLIB | The data set associated with this DD statement contains the load modules for the service manager address space and service address spaces. If these modules have been moved to ELPA, then this DD statement is not required for the Host Services procedures. |
| SYSCHKPT | This DD statement is used only by the service manager address space procedure. It contains gateway and trace information required to restore the state of the service manager in the event of a hot start. |
| SYSCOMP | This DD statement is used only by the CAS service procedures. The DD statement points to a met.REXXLIB library member that contains the control statement used to compress the temporary data set allocated by METCASIN. The temporary data set is compressed before writing the user script to prevent the data set from filling up. |
| SYSLOG | This DD statement is used only by the service manager address space procedure. All Host Services logging messages, whether presented by the service manager address space or one of the service address spaces, is written to this file. |

*Table 5 (Page 2 of 2). Cataloged procedure DD statements*

| Statement | Description |
|---|---|
| SYSPARM | This DD statement allocates the configuration information library (met.CONFIG). It is used only by the service manager address space procedure. |
| SYSPROC | This DD statement is used only by the CAS service procedures. You may concatenate any CLIST or REXX libraries that have matching *DCB* attributes. Commands invoked by the CAS script, as well as the script itself, are executed from SYSPROC. |
| SYSTERM<br>SYSTERMI | These DD statements are used only by the CAS service procedures. These data sets may contain C runtime library error and/or warning messages. If they are not allocated, C runtime library writes the messages to the MVS console. |
| SYSTSIN | This DD statement is used only by the CAS service procedures. This DD statement is required by TSO, but is not used. The name of the procedure to execute (METCASRX) is presented to TSO through a parameter list rather than SYSTSIN. |
| SYSTSPRT | This DD statement is used only by the CAS service procedures. A temporary sequential data set is allocated to this DD statement. The CAS service initializes this data set before invoking TSO to execute the user's script, and sends the contents of the data set bck to the CAS transformer on the user's workstation after the script has complete d execution. It is known to the transformer as the Run Log. The TSO WRITE and REXX SAY commands write to SYSTSPRT. |
| SYSUDUMP | Runtime abends of a service manager address space task, service address space, or its script are dumped to this data set. This information may be critical for resolving problems. |

## VTAM and NCP

This section provides guidance on the definition of IDS resources for VTAM and the relationship of certain VTAM parameters to other configuration elements for IDS. This section is not intended to describe the use of all possible combinations of statements and their parameters. For complete details on VTAM and NCP configuration, customization and operation, see the appropriate VTAM and NCP product documentation.

The principal IDS resources to be defined for VTAM and NCP are Communications Manager/2 PU and host LU names.

Sample files included on the distribution tape are coordinated with sample files for the database gateway service and other IDS components.

## Communications Manager/2

You connect Communications Manager/2 to the SNA network using the PU 2.1 communications protocol. With PU 2.1, one LU can support many sessions. Three basic methods exist for connecting an IDS database gateway service to an MVS host:

Token-ring or Ethernet LAN connection via 37*xx* communications controller

SDLC line via 37*xx* communications controller

3174 gateway

### Token-Ring and Ethernet LAN Connections

Database gateway services that are connected as PUs through LAN adapters in communications controllers are treated as switched network nodes; that is, they are treated much like network nodes that are connected as a result of an incoming or outgoing telephone call. Two types of VTAM major nodes must be defined:

A LAN major node that defines the LAN connection to the communications controller and to stations through which calls are made

A switched major node that defines the gateway service as a PU that can call through a station on a LAN major node

### SDLC Connections

When defining major nodes for SDLC-attached PCs, it is important that the value of *MAXBFRU* (in your NCP generation and in VTAM) be calculated correctly for each site. Failure to do so can result in unpredictable problems. Calculate *count* in the line *MAXBFRU = (*count*)* using the following formula:

count = (29 + maximum lowbar RU lowbar size)/IOBUF

where:

*IOBUF* is the size of VTAM's I/O buffers as specified in the VTAM start list.

Code other appropriate parameters to reflect the types of equipment used and their characteristics.

### 3174 Gateway Connections

If you use the 3174 gateway feature, some configuration items are moved from VTAM and the NCP to the 3174 itself. The 3174 gateway feature maps each PU of interest on the token ring to a subchannel address on the host. You associate a specific token-ring PU with a specific subchannel address on question 940 during the 3174 customization process. Use question 941 to establish buffer sizes to be allowed. *F=2* and *W=* work with the values specified in the sample gateway service configuration. Also, the locally administered token-ring address of the 3174 must be specified in the Communications Manager/2 running with the IDS OS/2 Database Gateway Service (the universal address does not work).

## Multiple Host Systems or VTAMs

IDS can involve more than one host system. The PU for every IDS LAN gateway must be defined on the host whose VTAM "owns" the Communications Manager for that gateway. Similarly, the Host Services LU names must be defined to VTAM on the MVS host that executes the Host Services application.

When more than one VTAM is involved, Host Services and database gateway service resources must be defined as cross-domain resources. You can achieve these definitions statically with CDRSC statements, but VTAM handles it automatically if you specify CDRDYN=YES and CDRSC=OPT in the CDRM statement for each VTAM that "owns" these resources.

# Chapter 3. Using the Network Planning Worksheets

This chapter contains samples of the worksheets to be completed during network planning sessions prior to installing Host Services. The worksheets are designed to help coordinate configuration planning among individuals with responsibilities for several critical system areas, primarily VTAM administration on the host and LAN administration on the IDS local area network.

This chapter describes the configuration parameter fields for each worksheet, and explains the reasons for setting parameters in certain ways to accommodate the IDS environment. Certain parameters are used on multiple worksheets; some of these are cross-referenced to matching parameters shown on the MVS host planning worksheets described in Chapter 4, "Using the MVS Host Planning Worksheets." A reference is shown in a format that resembles this example: (D-2). This sample reference indicates Worksheet D, Line 2. A field that shows a reference of this type indicates that the value entered in that field should match the value entered in the cross-referenced field. Shared parameters and naming conventions should be carefully coordinated among the administrators responsible for all areas of configuration.

The worksheets shown in this chapter are examples. Blank worksheet templates are provided in Appendix A, "Network Planning Worksheet Templates." You should use photocopies of the blank worksheets during the actual network planning process.

## Host Network Administration Worksheets

Configuring the host network (VTAM) part of MVS host-to-LAN communications for IDS involves using the information recorded by the planning group on the following three worksheets:

Worksheet A: Host Network Administration

This worksheet is for VTAM specialist to coordinate and define naming conventions for the following configuration points on the MVS host system that will run IDS Host Services:

SNA network name

Logon mode table name

Logon mode table entry name

IDS service manager host-to-gateway application ID

IDS service manager gateway-to-host application ID

APPC major node name

Worksheet B: Host Network Administration

This worksheet is for VTAM specialist to coordinate and define naming conventions for the following configuration points on the host system that will "own" the Communications Manager/2 program used by the IDS OS/2 Database Gateway Service.


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Note that in a cross-domain environment, this is not necessarily the MVS host system on which IDS Host Services will run.

SNA network name

Logon mode table name

Logon mode table entry name

Communications Manager/2 PU name

RU size (smallest maximum of any node)

Worksheet C: Host Network Administration

This worksheet is for VTAM specialist to coordinate and define naming conventions for the following data access configuration points on the MVS host system that will run IDS Host Services:

Gateway ID

Gateway type (CAS or SQS)

First in a series of IDS services host application ID names

Number of services

## Worksheet A: Host Network Administration

Providing the information for Worksheet A is the responsibility of the VTAM specialist in your organization. The information will be used later to configure VTAM and network connections for the MVS host workstation on which you intend to install IDS Host Services. For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The VTAM specialist must produce two copies of a completed Worksheet A: one copy for configuring the MVS host on which Host Services will run, and one copy for the LAN administrator responsible for configuring Communications Manager on the LAN.

If you plan to directly connect the MVS host system containing Host Services with a database gateway service on the IDS LAN, then the entries for lines 1, 2, and 3 on Worksheet A should match the entries for lines 1, 2, and 3 on Worksheet B.

After making a photocopy of the template Worksheet A contained in Appendix A, "Network Planning Worksheet Templates," the VTAM specialist should consult with the planning group and complete the photocopied worksheet according to the following instructions:

1. On the *SNA network name* line, fill in the name of the SNA network that contains the MVS host. This name is used in the Communications Manager's Partner LU definitions.

   If the MVS host system on which you intend to run IDS Host Services will own the Communications Manager/2 program that uses the database gateway service on the LAN side of the connection, the entry on this line should match the entry on Line 1 for Worksheet B.

2. On the *Logon mode table name* line, fill in the name to be assigned to the table that defines logon modes. These logon modes identify the session parameters for communications between Communications Manager/2 and the MVS host. The name can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric.

   The sample *Logon mode table name* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   METMODET

   The *Logon mode table name* is used in the VTAM definition on the MVS host.

3. On the *Logon mode table entry name* line, fill in the name to be assigned to the session parameter definition on the MVS host and to the Transmission Service Mode definition in Communications Manager/2. This entry identifies the session parameters for communications between the Communications Manager and the MVS host. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric.

   If the MVS host system on which you intend to run IDS Host Services will "own" the Communications Manager/2 program that resides with the database gateway service on the LAN side of the connection, the entry on this line should match the entry on Line 3 for Worksheet B.

   The sample *Logon mode table entry name* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   METMODE

   The *Logon mode table entry name* on this line is used in the Communications Manager's APPC transmission service mode and partner application ID definitions, in the gateways' configuration files, and in the APPC session parameters on the MVS host.

4. On the *IDS service manager host-to-gateway host APPL ID* line, enter the VTAM minor node name to be used by the service manager for host-to-gateway communications. The service manager uses the host-to-gateway communications path to report certain aspects of service address space status to the gateway, and to request selected functions for the gateway to perform.

   The APPC conversation naming convention in this publication uses the IDS subsystem name as the first four characters of the *APPL ID*, followed by the characters *HTG* for the host-to-gateway conversation and the characters *GTH* for the gateway-to-host conversation. The sample *APPL ID* is used by one IDS subsystem with all gateways that run under it.

   The sample IDS service manager host-to-gateway host application ID shown in the sample configuration file included on the MVS Host Services distribution tape is:

   METPHTG

   The *IDS service manager host-to-gateway host APPL ID* is used in the VTAM definition on the MVS host.

   Each Host Services subsystem has a unique host-to-gateway application ID.

5. On the *IDS service manager gateway-to-host APPL ID* line, enter the VTAM minor node name to be used by the service manager for gateway-to-host communications. The gateway-to-host communications path carries commands from the gateway to the service manager, including cancel requests and commands to start or stop service address spaces.

   The APPC conversation naming convention in this publication uses the IDS subsystem name as the first four characters of the *APPL ID*, followed by the characters*GTH* for the gateway-to-host conversation and the characters*HTG* for the host-to-gateway conversation. The sample *APPL ID* is used by one IDS subsystem with all gateways that run under it.

   The sample IDS service manager gateway-to-host application ID shown in the sample configuration file included on the MVS Host Services distribution tape is:

   METPGTH

   The *IDS service manager gateway-to-host APPL ID* is used in the VTAM definition on the MVS host.

   Each Host Services subsystem has a unique gateway-to-host application ID.

6. On the *APPC major node* line, enter the name of the VTAM major node for IDS Host Services communications. This name will be the member name in *SYS1.VTAMLST*. The major node naming convention in this publication uses the subarea designator *A01* for the VTAM that is running IDS Host Services, and uses *METP* for the IDS subsystem name. The major node name conveys information about the purpose of the node, and allows unambiguous naming if you want to run multiple IDS systems.

   The sample *APPC major node* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   A 1METP

   The *APPC major node* is used in the VTAM definition on the MVS host.

## Worksheet B: Host Network Administration

Providing the information for Worksheet B is the responsibility of the VTAM specialist in your organization. The information will be used later to configure VTAM and network connections for the host workstation that will "own" the Communications Manager/2 program used by the IDS OS/2 Database Gateway Service on the IDS LAN side of the connection. For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The VTAM specialist must produce just one copy of Worksheet B, because the information provided on the worksheet applies solely to the host system that will own Communications Manager/2.

The MVS host system on which you intend to install IDS Host Services does not necessarily have to be directly connected to the database gateway service with which you intend to communicate: cross-domain communications from the MVS system to the

gateway service through a VM system, for example, are acceptable. In other words, the MVS host system on which you intend to run IDS Host Services does not necessarily have to "own" the Communications Manager/2 program that resides with the gateway service on the LAN side of the connection.

If you plan to directly connect the MVS host system containing Host Services with a database gateway service on the IDS LAN, then the entries for lines 1, 2, and 3 on Worksheet B should match the entries for lines 1, 2, and 3 on Worksheet A.

After making a photocopy of the template Worksheet B contained in Appendix A, "Network Planning Worksheet Templates," the VTAM specialist should consult with the planning group and complete the photocopied worksheet according to the following instructions:

1. On the *SNA network name* line, fill in the name of the SNA network that contains the host that owns Communications Manager/2. This name is used in the Communications Manager's Local LU definitions. If the MVS host system on which you intend to run Host Services will also own the Communications Manager/2 program that uses the database gateway service on the LAN side of the connection, the entry on this line should match the entry on Line 1 for Worksheet A.
2. On the *Logon mode table name* line, fill in the name to be assigned to the table that defines logon modes. These logon modes identify the session parameters for communications between Communications Manager/2 and the host that owns Communications Manager/2. The name can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric.

   The sample *Logon mode table name* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   METMODET

   The *Logon mode table name* is used in the VTAM definition on the host that owns Communications Manager/2.
3. On the *Logon mode table entry name* line, fill in the name to be assigned to the session parameter definition on the host that will own Communications Manager/2, and to be assigned to the Transmission Service Mode definition in Communications Manager/2. This entry identifies the session parameters for communications between the Communications Manager and the host that owns Communications Manager/2. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric.

   If the MVS host system on which you intend to run Host Services will also own the Communications Manager/2 program that resides with the database gateway service on the IDS LAN side of the connection, the entry on this line should match the entry on Line 3 for Worksheet A.

   The sample *Logon mode table entry name* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   METMODE

The *Logon mode table entry name* on this line is used in the Communications Manager's APPC Transmission Service Mode and partner application ID definitions, in the gateways' configuration files, and in the APPC session parameters on the host that will own Communications Manager/2.

4. On the *Communications Manager/2 PU name* line, enter the PU name of Communications Manager/2, as defined for VTAM on the host that will own Communications Manager/2. The PU name must contain one to eight characters. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric.

   The sample *Communications Manager/2 PU name* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   PUGWA

   This name is used in the Communications Manager's SNA base profile or in the Network Definition File (NDF).

5. On the *RU size (smallest maximum of any node)* line, enter the request- or response-unit (RU) size. This decimal integer specifies the maximum size of messages transmitted between Communications Manager/2 and the host that owns Communications Manager/2. The RU size must be at least 256. For token-ring host connections, the RU size can be as large as 1024. For SDLC connections, it can be as large as 4096.

   The sample *RU size* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   512

   The value on this line is used in the Communications Manager's data-link control profile and also is used in defining APPC session parameters for VTAM on the host that owns Communications Manager/2.

## Worksheet C: Host Network Administration

Providing the information for Worksheet C is the responsibility of the VTAM specialist in your organization. The information will be used later to configure VTAM and network connections (such as NCP) for the MVS host workstation on which IDS Host Services will be installed. For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The VTAM specialist must produce one copy of Worksheet C for each gateway on the IDS LAN that will communicate with IDS Host Services on the MVS host system. A single IDS OS/2 Database Gateway Service can be configured to run multiple gateways.

After making the necessary number of photocopies of the template Worksheet C contained in Appendix A, "Network Planning Worksheet Templates," the VTAM specialist should consult with the planning group and complete each worksheet according to the following instructions:

1. On the *Gateway ID* line, enter the 3-character identifier of the LAN's DB2 gateway or CAS gateway. This identifier must be unique within the set of all gateways connecting to this host.

   The sample *Gateway ID* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   GWA

   The value on this line is used extensively in the configuration of the database gateway service, Communications Manager/2, and the Host Services service manager address space and service address spaces on the MVS host system. It is an element of transaction program names and application ID names for APPC conversations, as well as names for the Host Services service manager address space and service address spaces.

2. On the *Gateway type (CAS or SQS)* line, enter *CAS* for a Cooperative Application Services (CAS) gateway; or enter *SQS* for a DB2 gateway. The *Gateway type* is a parameter used in setting up the gateway configuration members on the host system.

3. On the *First in series of IDS services host APPL ID names* line, enter the first application ID name from the set of application IDs that you intend to configure for the gateway. It is assumed that you will use a standard naming convention such as the following, which is used on the MVS Host Services distribution tape:

   METGWA 1

   METGWA 2

   METGWA 8

   The naming convention used in this publication for service address space application IDs is composed of three characters *(MET*) followed by the three-character gateway ID (*GWA*), followed by two digits numbered sequentially from 01 to the number of services that are to be configured for this gateway (see Line 4).

4. On the *Number of services* line, specify how many data access services can run simultaneously under control of this gateway. This must be a decimal number between 1 and 32, inclusive.

   The number of services shown in the sample configuration file included on the MVS Host Services distribution tape is:

   8

   This number determines how many application IDs must be defined for VTAM and how many Host Services address spaces are to be started on the MVS host.

## LAN Administration Worksheets

Configuring the local area network (LAN) part of MVS host-to-LAN communications for IDS involves using the information recorded by the planning group on the following two worksheets:

Worksheet D: LAN Administration

This worksheet is for LAN administrator to coordinate and define naming conventions for the following configuration points for each personal workstation that will run database gateway services and be logically "owned" by a host system:

PC identification number

Communications Manager/2 SNA network name

Communications Manager/2 PU name

For LAN connections:

- Adapter number for host connection ( or 1)
- LAN type (Ethernet or Token-Ring)
- Host system LAN address

For SDLC connections:

- SDLC station address

Worksheet E: LAN Administration

This worksheet is for LAN administrator to coordinate and define naming conventions for the following configuration points for each gateway that will communicate with the VTAM host:

Gateway ID

TP name prefix (CA or SQ)

Communications Manager/2 LU profile name

## Worksheet D: LAN Administration

Providing the information for Worksheet D is the responsibility of the IDS LAN administrator in your organization, with cooperation from the VTAM specialist. The information will be used later to configure Communications Manager/2 for each IDS OS/2 Database Gateway Service that will communicate with IDS Host Services for MVS. For information about applying this information during the configuration process, see Chapter 6, "Configuring Communications Manager/2," in *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The LAN administrator must produce one copy of Worksheet D for each IDS LAN personal workstation that will run Communications Manager/2 and be physically attached to a VTAM host system.

After making the necessary number of photocopies of the template Worksheet D contained in Appendix A, "Network Planning Worksheet Templates," the LAN administrator should consult with the planning group and complete each worksheet according to the following instructions. The LAN administrator should make a copy of each completed worksheet available to the VTAM specialist.

1. On the *PC identification number* line, enter a unique, five-digit identification number. Using the last five digits of the workstation's serial number is a possible convention. This number is used in defining the workstation system as a unique

SNA network node. It is used for the *IDNUM* parameter in the major node definition that must be placed into *SYS1.VTAMLST*. The *IDBLK* and *IDNUM* combination must be unique.

This parameter is only valid for token-ring definitions to NCP or 3172 network connections.

2. On the *Communications Manager/2 SNA network name* line, fill in the name of the SNA network to which the Communications Manager is connected. This network name must be the same as that defined for VTAM on the host; it is not the name of a LAN. The network name must contain one to eight characters, and can consist of any combination of alphanumeric characters or national characters. The first character, however, cannot be numeric. For example:

   MYSNANET

   The Communications Manager's SNA base profile includes this name.

3. On the *Communications Manager/2 PU name* line, enter the PU name of the Communications Manager, as defined for VTAM on the host. The PU name must be one to eight characters long. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric. For example:

   PUGWA

   This name is used in the Communications Manager's SNA base profile.

4. If Communications Manager/2 is connected to the host system via a LAN, complete the following information:

   *Adapter number for host connection*:

   Specify which token-ring or Ethernet adapter (primary or secondary) connects the personal workstation to the LAN for communications with the host. Enter ***0*** for the primary adapter or ***1*** for the secondary adapter. This information is used in defining the Communication Manager's LAN profile.

   *LAN type*:

   Enter *Ethernet* or *Token-Ring*. This information is used in defining the Communication Manager's LAN profile.

   *Host system LAN address*:

   - For a 37*xx* connection, enter the locally administered adapter address.
   - For a 3174 connection, enter the locally administered address of the 3174, not the universal address.

   If Communications Manager/2 is connected to the VTAM host through SDLC, complete the following information:

   *SDLC station address*:

   Enter the address of the SDLC station. The SDLC address is a 2-digit hexadecimal address between *01* and *FE*, as shown in this example:

   3

The value on this line is used in the Communications Manager's Data Link Control (DLC) profile and in the PC system's PU definition in VTAM on the host.

## Worksheet E: LAN Administration

Providing the information for Worksheet E is the responsibility of the IDS LAN administrator in your organization. The information will be used later by the LAN administrator and the IDS administrator to configure Communications Manager TP names. The LAN administrator must produce one copy of Worksheet E for each IDS gateway that will access data on the MVS host system. One copy of each completed worksheet should be made available to the IDS administrator.

After making the necessary number of photocopies of the template Worksheet E contained in Appendix A, "Network Planning Worksheet Templates," the LAN administrator should consult with the planning group and complete each photocopied worksheet according to the following instructions.

1. On the *Gateway ID* line, enter the 3-character identifier of the LAN's DB2 gateway or CAS gateway. This identifier must be unique within the set of all gateways connecting to a particular host.

   The sample *Gateway ID* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   GWA

   The value on this line is used extensively in the configuration of the database gateway service, Communications Manager/2, and the Host Services service manager address space and service address spaces on the MVS host system. It is an element of transaction program names and logical unit names for APPC conversations, as well as names for the service manager address space and service address spaces.

2. On the *TP name prefix (CA or SQ)* line, enter *CA* for a Cooperative Application Services (CAS) gateway; or enter *SQ* for a DB2 gateway. This prefix is derived from the gateway type (*CAS* or *SQS*) entered for this gateway on worksheet lines C-2, F-2, and I-2. The TP name prefix is used together with the gateway ID entered on line E-1 and a 3-digit suffix (001, 002, etc.) to build a complete TP name for each host service address space.

   This information is used in TP name definitions when configuring Communications Manager/2.

3. On the *Communications Manager/2 LU profile name* line, enter the Communications Manager's LU profile name. The value on this line is not a prefix: no names are formed from it. Use the value on this line to enter a name for the sole LU profile.

## IDS Administration Worksheet

Configuring the IDS part of MVS host-to-LAN communications for IDS data access involves using the information recorded by the planning group on the following worksheet:

Worksheet F: IDS Administration

This worksheet is for the IDS administrator to coordinate and define naming conventions for the following configuration points for each IDS gateway that will communicate with the MVS host system:

Gateway ID

Gateway type (CAS or DB2)

Host type (MVS)

Realm name

Gateway name

Gateway service LAN adapter address

Number of services

## Worksheet F: IDS Administration

Providing the information for Worksheet F is the responsibility of the IDS administrator in your organization. The information will be used later to configure IDS gateways with the SA tool on the IDS LAN. For information about applying this information during the configuration process, see *Configuring and Administering Database Gateway Services*.

The IDS administrator must produce one copy of Worksheet F for each IDS gateway that will access data on the MVS host system. This information is needed by the IDS administrator and LAN administrator.

After making the necessary number of photocopies of the template Worksheet F contained in Appendix A, "Network Planning Worksheet Templates," the IDS administrator should consult with the planning group and complete each worksheet according to the following instructions.

1. On the *Gateway ID* line, enter the 3-character identifier of the LAN's DB2 gateway or CAS gateway. This identifier must be unique within the set of all gateways connecting to a particular host.

   The sample *Gateway ID* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   GWA

   The value on this line is used extensively in the configuration of the gateway service, Communications Manager/2, and the Host Services service manager address space and service address spaces on the MVS host system. It is an element of transaction program names and logical unit names for APPC conversations, as well as names for the service manager address space and service address spaces.

2. On the *Gateway type (CAS or DB2)* line, enter *CAS* for a Cooperative Application Services (CAS) gateway; or enter *DB2* for a DB2 gateway.
3. On the *Host type* line, *MVS* is entered for your convenience.
4. On the *Realm name* line, fill in the name (up to eight characters in length) of the IDS realm to which the gateway service is connected. This name is used by the data access tools to find the gateway service.
5. On the *Gateway name* line, enter the name of the gateway as it will be known to IDS users. This name is used in configuring a gateway through the *Gateway Configuration* window of the SA tool. For more information about gateway configuration, see *Configuring and Administering Database Gateway Services*.
6. On the *Gateway service LAN adapter address*line, enter the address of the LAN adapter to which the gateway service will be attached.
7. On the *Number of services* line, specify how many data access sessions can run simultaneously. This must be a decimal number between 1 and 32, inclusive. The number of services shown in the sample configuration file included on the MVS Host Services distribution tape is:

   8

   This number determines how many application IDs must be defined for VTAM and how many Host Services address spaces are to be started on the MVS host. The value entered here must match the value entered on Worksheet C, line 4.

# Chapter 4. Using the MVS Host Planning Worksheets

This chapter contains samples of the worksheets to be used during the host planning sessions. The worksheets are designed to help coordinate configuration planning among individuals with responsibilities for the following critical MVS system areas:

MVS security

MVS system programming

DB2 database administration

This chapter describes the configuration parameter fields for each worksheet, and explains the reasons for setting parameters in certain ways to accommodate the IDS environment. Certain parameters are used on multiple worksheets; some of these are cross-referenced to matching parameters shown on the MVS host planning worksheets described in Chapter 3, “Using the Network Planning Worksheets” on page 28." A reference is shown in a format that resembles this example: (D-2). This sample reference indicates Worksheet D, Line 2. A field that shows a reference of this type indicates that the value entered in that field should match the value entered in the cross-referenced field. Administrators responsible for all configuration areas should be carefully coordinate shared parameters and naming conventions.

The worksheets shown in this chapter are examples. Blank worksheet templates are provided in Appendix B, “MVS Host Planning Worksheet Templates” on page 58." You should use photocopies of the blank worksheets during the actual planning process for configuring the MVS host and DB2.

## MVS Security Administration Worksheet

Configuring MVS security for IDS Host Services involves using the information recorded by the planning group on the following worksheet:

Worksheet G: MVS Security Administration

This worksheet is for the MVS Security Administrator to coordinate and define naming conventions for the following configuration points on the MVS host system that will run IDS Host Services:

Security package (RACF, ACF2, or TOPSECRET)

User ID translation enablement

SVC caller verification

Grant READ access to specified data sets for the service manager

Grant UPDATE access to specified data sets for the service manager

Grant READ access to specified data sets for PUBLIC


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## Worksheet G: MVS Security Administration

This worksheet helps you define MVS security factors relevant to IDS Host Services for MVS.

1. On the*Security package* line, enter the name of the security system that will be used on the MVS host system:

   RACF

   ACF2

   TOPSECRET

   If your organization does not use one of the security packages listed here (or another package that emulates one of them), then you must provide your own connect exit routine. In this case, you can use the assembler source code provided for the *METCNCTX* exit routine as a model.

2. On the *User ID translation enablement (Yes or No)* line, enter *Yes* if you want to use the security facility described in *Installing Host Services and Configuring Host-to-LAN Communications for MVS*. During configuration, the default value is *No*.

3. On the *SVC caller verification (Yes or No)* line, enter *Yes* if you want the Host Services SVC routine to only accept requests from Host Services address spaces, JES, Master Scheduling, or interface address space.

   A *Yes* value entered during configuration prevents TSO users from using facilities such as System Display and Search Facility (SDSF) to issue Host Services commands.

   During configuration, the default value found in *met.CONFIG(METCNTRL)* is *No*.

4. On the *Grant READ access to the following data sets for the service manager* line, enter the values from Worksheet H, lines 1, 2, and 3, as indicated. This information is applied after loading the MVS Host Services distribution tape.

5. On the *Grant UPDATE access to the following data set for the service manager* line, enter the values from Worksheet H, lines 2 and 3, as indicated. This information is applied after loading the MVS Host Services distribution tape.

6. On the *Grant READ access to the following data sets for PUBLIC* line, enter the values from Worksheet H, lines 1 and 2, as indicated. This information is applied after loading the MVS Host Services distribution tape.

## MVS Systems Programming Worksheets

Configuration of MVS host-to-LAN communications by the MVS systems programmer/specialist involves using the information recorded by the planning group on the following worksheets:

Worksheet H: MVS Systems Programming

This worksheet is for the MVS systems programmer to coordinate and define naming conventions for the following MVS configuration points on the host system that will run IDS Host Services:

Host Services version number

IDS data set high-level qualifier

IDS subsystem name

IDS subsystem command recognition character(s)

IDS user SVC number

Link Pack Area library name

Linklist library name

Host code page

IDS service manager cataloged procedure name

IDS service manager performance group number

IDS service manager status exit name

IDS connect exit name

IDS SQL exit name

### Worksheet I: MVS Systems Programming

This worksheet is for the MVS systems programmer to coordinate and define naming conventions for the following IDS Host Services configuration points on the MVS host system that will run Host Services:

Gateway ID

Gateway type (CAS or SQS)

Cataloged procedure name

### Worksheet J: MVS Systems Programming

This worksheet is for the MVS systems programmer to coordinate and define naming conventions for the following CAS configuration points on the MVS host system that will run IDS Host Services and CAS applications:

CAS cataloged procedure name

CAS performance group number

SYSPROC temporary partitioned data set UNIT

SYSPROC temporary partitioned data set SER

SYSPROC temporary partitioned data set RECFM

SYSPROC temporary partitioned data set LRECL

SYSPROC temporary partitioned data set BLKSIZE

Data sets to concatenate to SYSPROC
in addition to the temporary data set defined above

### Worksheet K: MVS Systems Programming

This worksheet is for the MVS systems programmer to coordinate and define naming conventions for the following Host Services configuration points on the MVS host system that will run DB2:

IDS SQL services cataloged procedure name

IDS SQL services performance group number

DB2 load library names (if not in linklist)

## Worksheet H: MVS Systems Programming

Providing the information for Worksheet H is the responsibility of the MVS systems programmer/specialist in your organization. The information will be used later to configure MVS on the host workstation that will run IDS Host Services. For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communication for MVS*.

The MVS systems programmer must produce just one copy of Worksheet H, because the information provided on the worksheet applies solely to the MVS host system on which Host Services will run. If you intend to install Host Services on multiple MVS computers, you must repeat this procedure for each installation.

After making a photocopy of the template Worksheet H contained in Appendix B, "MVS Host Planning Worksheet Templates" on page 58. The MVS systems programmer should consult with the planning group and complete the photocopied worksheet according to the following instructions:

1. On the *Host Services version number* line, enter the number that identifies the version of IDS Host Services that you intend to install. Versions of Host Services software are identified by three digits separated by decimal points. For example, 2.1.0 indicates: Version 2, Release 1, Modification 0.

   This information will be used when creating an alias for the high-level qualifier during the loading of the first data set from the MVS Host Services distribution tape.

2. On the *IDS data set name high-level qualifier* line, enter the high-level qualifier to be used for the names of Host Services data sets. The examples used throughout the IDS library use *MET* for the high-level qualifier.

   This information will be used when creating an alias for the high-level qualifier during the loading of the first data set from the MVS Host Services distribution tape. For more information about loading data sets from the MVS Host Services distribution tape.

3. On the *IDS subsystem name* line, enter the name of the subsystem that Host Services is to use for communications between the service manager address space and service address spaces, and for an interface with the MVS interface. Maximum length is 4 characters.

   This information will be used when updating *SYS1.PARMLIB(IEFSSNxx)* to install the Host Services subsystem.

4. On the *IDS subsystem command recognition character* line, enter the non-alphanumeric character that identifies Host Services commands when they are entered from an MVS interface. For example, you could use the dollar sign ($), number sign (#), or at sign (@), if the character is not already in use by another

subsystem. This character precedes commands that are entered at an MVS interface for the Host Services subsystem to ensure that those commands are passed to the correct subsystem. Examples throughout the IDS library use an exclamation point ( ! ) for the command recognition character.

You have the option to enter a second character on the *IDS subsystem command recognition character* line. The second character can be either alphanumeric or non-alphanumeric. This is useful if you have multiple Host Services subsystems and a limited number of unique characters.

The *IDS subsystem command recognition characters* are used when installing the Host Services subsystem.

5. On the *IDS user SVC number (decimal)* line, enter the 3-digit number (for example, 224) for the type-3 SVC that Host Services uses to perform authorized functions.

   The *IDS user SVC number* is used when installing the Host Services subsystem.

6. On the *Link Pack Area library name* line, enter the name of the library that contains IDS link pack area modules to be used at IPL time.

7. On the *Linklist library name* line, enter the name of the library that contains IDS link library modules to be used at IPL time.

8. On the *Host code page* line, enter the 3-digit number of the code page that the host uses. For example, enter *037* to specify the EBCDIC code page for United States English, Canadian, Dutch, and Brazilian Portuguese.

9. On the *IDS service manager cataloged procedure name* line, enter the name of the cataloged procedure for the Host Services service manager address space. The value *METSMGR* is used in examples throughout this manual and related manuals in the IDS library.

10. On the *IDS service manager performance group number* line, enter the 3-digit number (for example, 200) that is the SRM performance group number for the service manager address space.

    Coordinate the *service manager performance group* value with your system's tuning specialist. Make sure that the service manager address space is assigned a higher priority than the service address spaces.

11. On the *IDS service manager status exit name* line, enter the name of the user exit routine that is to report Host Services status information periodically. If there is no user exit routine, enter *NONE*.

    This user exit routine formats and prints Host Services status information at the time interval specified by the Host Services configuration parameter STATUSINTERVAL. The routine must be written in assembler code. For other information, see the comments in the sample exit routine, *METSTATR*, located in met.SAMPLIB.

12. On the *IDS connect exit name* line, enter the name of the routine (for example, METCNCTX) to be executed when a user wants to connect to a service.

    The source for the METCNCTX routine is included in met.SAMPLIB.

13. On the *IDS SQL exit name* line, do one of the following:

Leave the line blank to prevent use of an SQL exit routine

Enter *METSQLX* to specify the exit routine distributed with the Host Services software

Enter the name of an exit routine written by your site

For detailed information about the SQL exit routine, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

## Worksheet I: MVS Systems Programming

Providing the information for Worksheet I is the responsibility of the MVS systems programmer/specialist in your organization. The information will be used later to configure MVS on the host workstation that will run IDS Host Services. For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The MVS systems programmer must produce one copy of Worksheet I for every IDS gateway that will communicate with the MVS host system, including DB2 database gateways and CAS gateways.

The MVS systems programmer should make the required number of photocopies of the template Worksheet I contained in Appendix B, “MVS Host Planning Worksheet Templates” on page 58." The systems programmer should consult with the planning group-especially the VTAM specialist, IDS LAN administrator, and IDS administrator–and then complete each worksheet according to the following instructions:

1. On the *Gateway ID* line, enter the 3-character identifier of the LAN's DB2 gateway or CAS gateway based on the entries established for Worksheet C line 1, Worksheet E line 1, and Worksheet F line 1. This identifier must be unique within the set of all gateways connecting to this host.

   The sample *Gateway ID* shown in the sample configuration file included on the MVS Host Services distribution tape is:

   GWA

   The value on this line is used extensively in the configuration of the database gateway service, Communications Manager/2, and the Host Services service manager address space and service address spaces on the MVS host system. It is an element of transaction program names and logical unit names for APPC conversations, as well as names for the Host Services service manager address space and service address spaces.

2. On the *Gateway type (CAS or SQS)* line, enter *CAS* for a Cooperative Application Services (CAS) gateway; or enter *SQS* for a DB2 gateway.

3. On the *Cataloged procedure name* line, enter the name of the cataloged procedure that will be executed by the host services owned by this gateway. See Worksheets J and K for JCL requirements for the cataloged procedures.

## Worksheet J: MVS Systems Programming

Providing the information for Worksheet J is the responsibility of the MVS systems programmer/specialist in your organization. Worksheet J allows you to enter host REXX procedure library setup information for IDS Cooperative Application Services (CAS) application use. The script that is uploaded from the CAS transformer to run a CAS application is stored in a temporary library allocated by the CAS service address space cataloged procedure. The parameters on this worksheet allow you to specify the attributes of that library. These attributes should be set to conform to the attributes of other REXX or CLIST libraries that are included in the SYSPROC concatenation.

For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The MVS systems programmer must produce one copy of template Worksheet J, contained in Appendix B, "MVS Host Planning Worksheet Templates" on page 58, for every CAS cataloged procedure. The systems programmer should consult with the planning group, and then complete each worksheet according to the following instructions:

1. On the *CAS cataloged procedure name* line, enter the name of the cataloged procedure. METCAS is the cataloged procedure name supplied in met.JCL.
2. On the *CAS performance group number* line, enter the 3-digit number (for example, 200) that is the SRM performance group number for the CAS service address space.

   Coordinate the *CAS performance group* value with your system's tuning specialist. Make sure that you give CAS service address spaces a lower priority than the service manager address space.
3. On the *SYSPROC temporary partitioned data set UNIT* line, enter the unit name for the device where the CAS service address space should allocate the temporary REXX library that will contain incoming REXX procedures.
4. On the *SYSPROC temporary partitioned data set SER* line, enter the volume serial number of the device where the temporary REXX library will be allocated.
5. On the *SYSPROC temporary partitioned data set RECFM* line, enter the same RECFM that is used by the other REXX and CLIST libraries in your system. During configuration, a default value (*FB*) is provided for fixed length, blocked libraries.
6. On the *SYSPROC temporary partitioned data set LRECL* line, enter the same LRECL as is used by the other REXX and CLIST libraries in your system.
7. On the *SYSPROC temporary partitioned data set BLKSIZE* line, enter the largest BLKSIZE of any of the other REXX and CLIST libraries that will be allocated to the SYSPROC DD in your CAS service catalogued procedure.
8. On the *Data sets to concatenate to SYSPROC in addition to the temporary data set defined above* lines, enter additional data set names that contain REXX or CLIST procedures called by user applications.

## Worksheet K: MVS Systems Programming

Providing the information for Worksheet K is the responsibility of the MVS systems programmer/specialist in your organization. Worksheet K allows you to enter information for each SQL services cataloged procedure.

For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The MVS systems programmer must produce one copy of template Worksheet K, contained in Appendix B, "MVS Host Planning Worksheet Templates" on page 58, for every SQS cataloged procedure. The systems programmer should consult with the planning group, and then complete each worksheet according to the following instructions:

1. On the *IDS SQL services cataloged procedure name* line, enter the name of the cataloged procedure. METSQS is the cataloged procedure name supplied in met.JCL.
2. On the *IDS SQL services performance group number* line, enter the 3-digit number (for example, 200) that is the SRM performance group number for the SQL service address space.

   Coordinate the *SQL service performance group* value with your system's tuning specialist. Make sure you give SQL service address spaces a lower priority than the service manager address space.
3. On the *DB2 load library names (if not in linklist)* line, enter the names of the libraries containing load modules for the different versions of DB2 that can be executed through services started using this cataloged procedure.

   You can only specify multiple DB2 versions if the *Permanent connection* entry on line 2 of Worksheet L is set to *No*.

   The dd name must begin with DSN, followed by the three-digit DB2 version number. For example, use DSN310 to specify the name used to allocate the DSNLOAD data set for DB2 version 3.1.0.

## DB2 Administration Worksheets

Configuring DB2 to enable access from the IDS environment involves using the information recorded by the planning group on the following worksheet:

Worksheet L: DB2 Administration

This worksheet is for the DB2 database administrator to coordinate and define parameters that describe the DB2 environment to IDS Host Services. The parameters require naming conventions for the following global information on the MVS host system that will run DB2:

Default DB2 subsystem name

Permanent connection (Yes or No)

DB2 thread creation (Connect or LUW)

Use DEGREE ANY (Yes or No)

IDS application plan name prefixes

Worksheet M: DB2 Administration

This worksheet provides the DB2 database administrator with information necessary to create a Workstation Tools Data Dictionary (WTDD) in the specified DB2 subsystem:

DB2 subsystem name

WTDD database name

WTDD index storage group name

WTDD primary storage allocation

WTDD secondary storage allocation

WTDD table owner

WTDD select privileges

## Worksheet L: DB2 Administration

Providing the information for Worksheet L is the responsibility of the DB2 database administrator in your organization. Worksheet L allows you to enter global parameters that describe the DB2 environment to IDS Host Services.

For information about applying this information during the configuration process, see *Installing Host Services and Configuring Host-to-LAN Communications for MVS*.

The DB2 database administrator should produce one copy of template Worksheet L, contained in Appendix B, "MVS Host Planning Worksheet Templates" on page 58 for every DB2 subsystem running on the MVS host system. The DB2 database administrator should consult with the planning group, and then complete each worksheet according to the following instructions:

1. On the *Default DB2 subsystem name* line, enter the subsystem name that Host Services will use as the default when a user connects to DB2 and either:

   Does not explicitly specify a DB2 subsystem name

   Specifies the name *DBS*

2. On the *Permanent connection* line, enter *Yes* or *No* to specify whether an SQL service address space should establish a permanent connection to DB2.

   The configuration default, *No*, provides greater flexibility than a *Yes* entry. It allows the service to connect to DB2 subsystems that are of different release levels. It also prevents unused services from being displayed when the DB2 command DISPLAY THREAD (*) is used.

   The benefit of specifying *Yes* to this option is that it reduces processing overhead when an IDS user opens a data access tool that connects to the service.

3. On the *DB2 thread creation (Connect or LUW)* line, enter one of the following:

**CONNECT** To open the DB2 thread for SQL requests when the workstation user connects to DB2 and to close it when the user disconnects.

**LUW** To open the thread at the beginning of a logical unit of work and close it at the end of a logical unit of work.

The *LUW* setting minimizes the total number of threads active on the system, but incurs additional overhead for each SQL statement.

4. On the *Use DEGREE ANY (Yes or No)* line, enter *Yes* or *No* to specify whether queries destined for DB2 version 3.1 or higher should first issue the SQL statement SET CURRENT DEGREE = 'ANY'. If activated, processing overhead is incurred whenever a DB2 thread is opened to a DB2 subsystem at version 3.1 or higher. Thread opening is controlled by the value specified for line 3, *DB2 thread creation*. Specifying *Yes* for this line can improve DB2 performance for partitioned table spaces at the cost of slight additional overhead whenever a thread is opened.
5. On each *IDS application plan name prefix*es line, enter the DB2 subsystem name and the prefix, consisting of 1 to 7 characters, for Host Services application plan names. Host Services allows you to use different application plan names in different DB2 subsystems. Two application plans are required:

   An application plan with the isolation level specified as "repeatable read," is used during transaction processing (SQL statements bracketed by BEGIN TRANSACTION and END TRANSACTION commands).

   An application plan with the isolation level specified as "cursor stability," is used for all other processing.

   Host Services routines append *C* or *R* to the plan-name prefix to generate the full plan name. The sample configuration uses the value (*DSN, METPLAN*) to specify the plan names METPLANC and METPLANR for subsystem DSN.

## Worksheet M: DB2 Administration

Providing the information for Worksheet M is the responsibility of the DB2 database administrator in your organization. This worksheet provides you with the information needed to create a Workstation Tools Data Dictionary (WTDD) in a specified DB2 subsystem. You can create more than one WTDD in a particular DB2 subsystem. You can add additional WTTDs after IDS is operational.

The information entered on Worksheet M will be used by the WTLOAD job provided in the Host Services JCL library.

1. On the *DB2 subsystem name* line, enter the name of the DB2 subsystem for which you want to create a WTDD.
2. On the *WTDD database name* line, enter the name of the DB2 database that includes the table space for the WTDD. The default value for this field is METDB.
3. On the *WTDD tablespace name* line, enter the name of the table space that is to contain the WTDD tables. This name must contain one to eight characters. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric.

During configuration, the default value for this field is METDBAWT.

4. On the *WTDD tablespace storage group name* line, enter the name of the storage group for the WTDD table space. A storage group is a named set of direct access storage device (DASD) disk volumes.

   The tables can reside in the same storage group as the WTDD index storage group defined on line 5; however, using separate storage groups can optimize performance.

   The *WTDD tablespace storage group name* must contain one to eight characters. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric. You can use previously defined storage groups or specify new ones.

   During configuration, the default value for this field is METSG1D.

5. On the *WTDD index storage group name* line, enter the name of the storage group for the indexes to the WTDD tables. A storage group is a named set of DASD (disk) volumes.

   The indexes can reside in the same storage group as the WTDD tablespace storage group defined on line 4; however, using separate storage groups can optimize performance.

   The *WTDD index storage group name* must contain one to eight characters. It can consist of any combination of alphanumeric characters or national characters, except that the first character cannot be numeric. You can use previously defined storage groups or specify new ones.

   During configuration, the default value for this field is METSG1I.

6. On the *WTDD primary storage allocation (in KB)* line, enter the number of kilobytes of disk space to be allocated (from the storage group) for the primary extent of the WTDD table space.

   During configuration, the default value for this field is *500*.

7. On the *WTDD secondary storage allocation (in KB)* line, enter the number of kilobytes of disk space to be allocated (from the storage group) for secondary extents of the WTDD table space.

   During configuration, the default value for this field is *100.*

8. On the *WTDD table owner* line, enter the DB2 authorization ID that is to have ownership privileges of the WTDD. Normally, this ID should be the IDS database administrator's ID.

   During configuration, the default value for this field is METDBA.

9. On the *WTDD select privileges* line, enter the list of DB2 authorization IDs that are to have select privileges on the WTDD, or PUBLIC.

   During configuration the default value for this field is PUBLIC.

# Appendix A. Network Planning Worksheet Templates

Use the the following worksheet templates to produce the number of photocopied worksheets required for your network planning sessions. Preserve the original template worksheets in the appendix so that you can make additional copies when necessary.

The worksheets are designed to help coordinate network configuration planning among several individuals with responsibilities for several critical system areas, primarily VTAM administration on the host and LAN administration on the IDS local area network.

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Responsibility: VTAM Specialist

Name:_____

# Worksheet A:

Date:_____ ___ of ___

# Host Network Administration

## Information used on MVS host running IDS software

Complete one copy of this worksheet for the MVS host system on which you intend to install IDS Host Services.

1. SNA network name ___ ___ ___ ___ ___ ___ ___ ___
2. Logon mode table name ___ ___ ___ ___ ___ ___ ___ ___
3. Logon mode table entry name ___ ___ ___ ___ ___ ___ ___ ___
4. IDS service manager host-to-gateway APPL ID ___ ___ ___ ___ ___ ___ ___ ___
5. IDS service manager gateway-to-host APPL ID ___ ___ ___ ___ ___ ___ ___ ___
6. APPC major node name ___ ___ ___ ___ ___ ___ ___ ___

Distribute to: _____

Responsibility: VTAM Specialist

Name:_____

# Worksheet B:

Date:_____ ___ of ___

# Host Network Administration

## Information used on host that owns Communications Manager/2

Complete one copy of this worksheet for the host system that will "own" the Communications Manager/2 program used by the IDS database gateway service.

1. SNA network name — __ __ __ __ __ __ __ __ (D-2)
2. Logon mode table name — __ __ __ __ __ __ __ __
3. Logon mode table entry name — __ __ __ __ __ __ __ __
4. Communications Manager/2 PU name — __ __ __ __ __ __ __ __ (D-3)
5. RU size (smallest maximum of any node) — __ __ __ __ __ __ __ __

Distribute to: _____

Responsibility: VTAM Specialist

Name:_____

# Worksheet C:

Date:_____ ___ of ___

# Host Network Administration

## Information used on MVS host running IDS software

Complete one copy of this worksheet for each IDS gateway that will communicate with the MVS host system on which you intend to install IDS Host Services.

1. Gateway ID (alphanumeric) ___ ___ ___
   (E-1) and (F-1) and (I-1)

2. Gateway type (CAS or SQS) ___ ___ ___
   (I-2)

3. First in series of IDS services host APPL ID names ___ ___ ___ ___ ___ ___ ___ ___

4. Number of services ___ ___
   (F-7)

Distribute to: _____

Responsibility: IDS LAN Administrator

Name:_____

# Worksheet D:

# LAN Administration

Date:_____ ___ of ___

## Information used on each PC physically attached to host ___

Complete one copy of this worksheet for each personal computer that will run a database gateway service and be physically attached to a VTAM host system.

1. PC identification number ___ ___ ___ ___ ___

2. Communications Manager/2 SNA network name ___ ___ ___ ___ ___ ___ ___ ___ (B-1)

3. Communications Manager/2 PU name ___ ___ ___ ___ ___ ___ ___ ___ (B-4)

4. If Communications Manager/2 is connected to the host system through a LAN, complete the following information:

   a. Adapter number for host connection (0 or 1) __

   b. LAN type (Ethernet or Token-Ring) _____

   c. Host system LAN address __ __ __ __ - __ __ __ __ - __ __ __ __

   If Communications Manager/2 is connected to the host system through SDLC, complete the following information:

   d. SDLC station address ___ ___

Distribute to: _____

Responsibility: DIS LAN Administrator

Name:_____

# Worksheet E:

# LAN Administration

Date:_____ ___ of ___

## Information used for each IDS gateway connected to MVS

Complete one copy of this worksheet for each gateway that will access data on the MVS host system.

1. Gateway ID (alphanumeric) ___ ___ ___
   (C-1) and (F-1) and (I-1)

2. TP name prefix (CA or SQ) ___ ___

3. Communications Manager/2 LU profile name ___ ___ ___ ___ ___ ___ ___ ___

Distribute to: _____

Responsibility: IDS Administrator

Name:_____

# Worksheet F:

Date:_____ ___ of ___

# IDS Administration

## Information used for each IDS gateway connected to MVS

Complete one copy of this worksheet for each DB2 gateway or CAS gateway that will access data on the MVS host system.

1. Gateway ID (alphanumeric) ___ ___ ___ (C-1) and (E-1) and (I-1)
2. Gateway type (CAS or DB2) ___ ___ ___
3. Host type M V S
4. Realm name _____
5. Gateway name _____
6. Gateway service LAN adapter address __ __ __ __ - __ __ __ __ - __ __ __ __
7. Number of services ___ ___ (C-4)

Distribute to: _____

# Appendix B. MVS Host Planning Worksheet Templates

Use the following worksheet templates to produce photocopies for your MVS host planning sessions. Preserve the original template worksheets in the appendix so that you can make additional copies when[nbsp]necessary.

The worksheets are designed to help coordinate configuration planning among individuals with responsibilities for several critical MVS system areas:

- MVS security
- MVS system programming
- DB2 database administration


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Responsibility: MVS Security Administrator Name:_____

# Worksheet G:

Date:_____ ___ of ___

# MVS Security Administration

## Information used on MVS host running IDS software

Complete one copy of this worksheet for each MVS host system on which you intend to install IDS Host Services.

1. Security package (RACF, ACF2, or TOPSECRET) _____

2. User ID translation enablement (Yes or No) _____

3. SVC caller verification (Yes or No) _____

4. Grant READ access to the following data sets for the service manager:

   _____._____.CONFIG
   (H-2) (H-3)

   _____._____.ENUMSGS
   (H-2 (H-1)

5. Grant UPDATE access to the following data set for the service manager:

   _____._____.CHKPOINT
   (H-2) (H-3)

6. Grant READ access to the following data sets for PUBLIC:

   _____._____.LOAD
   (H-2) (H-1)

   _____._____.REXXLIB
   (H-2) (H-1)

   _____._____.RUNTIME
   (H-2) (H-1)

   _____._____.SQLMACRO
   (H-2) (H-1)

Responsibility: MVS Systems Programmer/Specialist Name:_____

# Worksheet H:

Date:_____ ___ of ___

# MVS Systems Programming

## General information used on MVS host running IDS software

Complete one copy of this worksheet for each MVS host system on which you intend to install IDS Host Services.

1. Host Services version number (e.g., V2R1M0) V___ R___ M___ ___ (G-4, G-6)
2. IDS data set high-level qualifier (e.g., MET) ___ ___ ___ ___ ___ ___ ___ ___ (G-4, G-5, G-6)
3. IDS subsystem name (e.g., METP) ___ ___ ___ ___ (G-5)
4. IDS subsystem command recognition character(s) ___ ___
5. IDS user SVC number (decimal) (e.g., 224) ___ ___ ___
6. Link Pack Area library name _____
7. Linklist library name _____
8. Host code page (037 = U.S. EBCDIC) ___ ___ ___ ___ ___
9. IDS service manager cataloged procedure name ___ ___ ___ ___ ___ ___ ___ ___
10. IDS service manager performance group number ___ ___ ___
11. IDS service manager status exit name (or NONE) ___ ___ ___ ___ ___ ___ ___ ___
12. IDS connect exit name (e.g., METCNCTX) ___ ___ ___ ___ ___ ___ ___ ___
13. IDS SQL exit name (e.g., METSQLX or NONE) ___ ___ ___ ___ ___ ___ ___ ___

Distribute to: _____

Responsibility: MVS Systems Programmer/Specialist Name:_____

# Worksheet I:

Date:_____ ___ of ___

# MVS Systems Programming

## Information used on MVS host running DIS software

Complete one copy of this worksheet for each DB2 gateway or CAS gateway that will communicate with the MVS host system.

1. Gateway ID (alphanumeric) __ __ __
   (C-1, E-1, F-1)

2. Gateway type (CAS or SQS) __ __ __
   (C-2)

3. Cataloged procedure name __ __ __ __ __ __ __ __

Distribute to: _____

Responsibility: MVS Systems Programmer/Specialist Name:_____

## Worksheet J:

Date:_____ ___ of ___

## MVS Systems Programming

---

Complete one copy of this worksheet for each Cooperative Application Services (CAS) cataloged procedure.

1. CAS cataloged procedure name ___ ___ ___ ___ ___ ___ ___ ___
2. CAS performance group number ___ ___ ___ ___ ___ ___ ___ ___
3. SYSPROC temporary partitioned data set UNIT ___ ___ ___ ___ ___ ___ ___ ___
4. SYSPROC temporary partitioned data set SER ___ ___ ___ ___ ___ ___ ___ ___
5. SYSPROC temporary partitioned data set RECFM ___ ___ ___ ___ ___ ___ ___ ___
6. SYSPROC temporary partitioned data set LRECL ___ ___ ___ ___ ___ ___ ___ ___
7. SYSPROC temporary partitioned data set BLKSIZE ___ ___ ___ ___ ___ ___ ___ ___
8. Data sets to concatenate to SYSPROC in addition to the temporary data set defined above:

_____

_____

_____

_____

_____

Distribute to: _____

Responsibility: MVS Systems Programmer/Specialist Name:_____

# Worksheet K:

Date:_____ ___ of ___

# MVS Systems Programming

## Information used on MVS host system running DB2

Complete one copy of this worksheet for each SQL services (SQS) cataloged procedure.

1. IDS SQL services cataloged procedure name ___ ___ ___ ___ ___ ___ ___ ___
2. IDS SQL services performance group number ___ ___ ___
3. DB2 load library names (if not in linklist):

| DD Name | Data Set Name |
|---|---|
| DSN___ ___ ___ | _____ |
| DSN___ ___ ___ | _____ |
| DSN___ ___ ___ | _____ |
| DSN___ ___ ___ | _____ |

Distribute to: _____

Responsibility: DB2 Database Administrator Name:_____

# Worksheet L:

Date:_____ ___ of ___

# DB2 Administration

## Global information used on MVS host system running DB2___

Complete one copy of this worksheet for the MVS host system.

1. Default DB2 subsystem name ___ ___ ___ ___
2. Permanent connection (Yes or No) ___ ___ ___ ___ ___ ___ ___
3. DB2 thread creation (Connect or LUW) _____
4. Use DEGREE ANY (Yes or No) _____
5. IDS application plan name prefixes:

| DB2 subsystem | Plan prefix |
|---|---|
| ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ ___ |
| ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ ___ |
| ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ ___ |
| ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ ___ |
| ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ ___ |
| ___ ___ ___ ___ | ___ ___ ___ ___ ___ ___ ___ |

Distribute to:_____

Responsibility: DB2 Database Administrator Name:_____

# Worksheet M:

Date:_____ ___ of ___

# DB2 Administration

## Information used on MVS host system running DB2

Complete one copy of this worksheet for each IDS Workstation Tools Data Dictionary (WTDD) to be installed in the specified DB2 subsystem.

1. DB2 subsystem name ___ ___ ___ ___
2. WTDD database name ___ ___ ___ ___ ___ ___ ___ ___
3. WTDD tablespace name ___ ___ ___ ___ ___ ___ ___ ___
4. WTDD tablespace storage group name ___ ___ ___ ___ ___ ___ ___ ___
5. WTDD index storage group name ___ ___ ___ ___ ___ ___ ___ ___
6. WTDD primary storage allocation (in KB) ___ ___ ___ ___
7. WTDD secondary storage allocation (in KB) ___ ___ ___ ___
8. WTDD table owner ___ ___ ___ ___ ___ ___ ___ ___
9. WTDD select privileges _____

Distribute to: _____

# Appendix C. Worksheet Indexes

Use the tables in this appendix to identify a particular worksheet, locate a configuration point, or determine worksheet responsibility. The tables list all worksheets and configuration points in various sort orders to allow you to quickly locate any worksheet item.

*Table 6 (Page 1 of 3). Worksheet configuration points, sorted by worksheet ID and line number*

| Worksheet ID and Title | Line No. | Worksheet Line Label |
|---|---|---|
| A - Host Network Administration | 1 | SNA network name |
| A - Host Network Administration | 2 | Logon mode table name |
| A - Host Network Administration | 3 | Logon mode table entry name |
| A - Host Network Administration | 4 | IDS service manager host-to-gateway application ID |
| A - Host Network Administration | 5 | IDS service manager gateway-to-host application ID |
| A - Host Network Administration | 6 | APPC major node name |
| B - Host Network Administration | 1 | SNA network name |
| B - Host Network Administration | 2 | Logon mode table name |
| B - Host Network Administration | 3 | Logon mode table entry name |
| B - Host Network Administration | 4 | Communications Manager/2 PU name |
| B - Host Network Administration | 5 | RU size (smallest maximum of any node) |
| C - Host Network Administration | 1 | Gateway ID |
| C - Host Network Administration | 2 | Gateway type (CAS or SQS) |
| C - Host Network Administration | 3 | First in a series of IDS services host application ID names |
| C - Host Network Administration | 4 | Number of services |
| D - LAN Administration | 1 | PC identification number |
| D - LAN Administration | 2 | Communications Manager/2 SNA network name |
| D - LAN Administration | 3 | Communications Manager/2 PU name |
| D - LAN Administration | 4-a | Adapter number for host connection (0 or 1) |
| D - LAN Administration | 4-b | LAN type (Ethernet or Token-Ring) |
| D - LAN Administration | 4-c | Host system LAN address |
| D - LAN Administration | 4-d | SDLC station address |
| E - LAN Administration | 1 | Gateway ID |
| E - LAN Administration | 2 | TP name prefix (CA or SQ) |
| E - LAN Administration | 3 | Communications Manager/2 LU profile name |
| F - IDS Administration | 1 | Gateway ID |
| F - IDS Administration | 2 | Gateway type (CAS or DB2) |
| F - IDS Administration | 3 | Host type (MVS) |


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*Table 6 (Page 2 of 3). Worksheet configuration points, sorted by worksheet ID and line number*

| Worksheet ID and Title | Line No. | Worksheet Line Label |
|---|---|---|
| F - IDS Administration | 4 | Realm name |
| F - IDS Administration | 5 | Gateway service name |
| F - IDS Administration | 6 | Gateway service LAN adapter address |
| F - IDS Administration | 7 | Number of services |
| G - MVS Security Administration | 1 | Security package (RACF, ACF2, or TOPSECRET) |
| G - MVS Security Administration | 2 | User ID translation enablement |
| G - MVS Security Administration | 3 | SVC caller verification |
| G - MVS Security Administration | 4 | Grant READ access to specified data sets for the service manage |
| G - MVS Security Administration | 5 | Grant UPDATE access to specified data sets for the service manager |
| G - MVS Security Administration | 6 | Grant READ access to specified data sets for PUBLIC |
| H - MVS Systems Programming | 1 | Host Services version number |
| H - MVS Systems Programming | 2 | IDS data set high-level qualifier |
| H - MVS Systems Programming | 3 | IDS subsystem name |
| H - MVS Systems Programming | 4 | IDS subsystem command recognition character(s) |
| H - MVS Systems Programming | 5 | IDS user SVC number |
| H - MVS Systems Programming | 6 | Link Pack Area library name |
| H - MVS Systems Programming | 7 | Linklist library name |
| H - MVS Systems Programming | 8 | Host code page |
| H - MVS Systems Programming | 9 | IDS service manager cataloged procedure name |
| H - MVS Systems Programming | 10 | IDS service manager performance group number |
| H - MVS Systems Programming | 11 | IDS service manager status exit name |
| H - MVS Systems Programming | 12 | IDS connect exit name |
| H - MVS Systems Programming | 13 | IDS SQL exit name |
| I - MVS Systems Programming | 1 | Gateway ID |
| I - MVS Systems Programming | 2 | Gateway type (CAS or SQS) |
| I - MVS Systems Programming | 3 | Cataloged procedure name |
| J - MVS Systems Programming | 1 | CAS cataloged procedure name |
| J - MVS Systems Programming | 2 | CAS performance group number |
| J - MVS Systems Programming | 3 | SYSPROC temporary partitioned data set UNIT |
| J - MVS Systems Programming | 4 | SYSPROC temporary partitioned data set SER |
| J - MVS Systems Programming | 5 | SYSPROC temporary partitioned data set RECFM |
| J - MVS Systems Programming | 6 | SYSPROC temporary partitioned data set LRECL |

*Table 6 (Page 3 of 3). Worksheet configuration points, sorted by worksheet ID and line number*

| Worksheet ID and Title | Line No. | Worksheet Line Label |
|---|---|---|
| J - MVS Systems Programming | 7 | SYSPROC temporary partitioned data set BLKSIZE |
| J - MVS Systems Programming | 8 | Data sets to concatenate to SYSPROC in addition to the temporary data set defined above |
| K - MVS Systems Programming | 1 | IDS SQL services cataloged procedure name |
| K - MVS Systems Programming | 2 | IDS SQL services performance group number |
| K - MVS Systems Programming | 3 | DB2 load library names (if not in linklist) |
| L - DB2 Administration | 1 | Default DB2 subsystem name |
| L - DB2 Administration | 2 | Permanent connection (Yes or No) |
| L - DB2 Administration | 3 | DB2 thread creation (Connect or LUW) |
| L - DB2 Administration | 4 | Use DEGREE ANY (Yes or No) |
| L - DB2 Administration | 5 | IDS application plan name prefixes |
| M - DB2 Administration | 1 | DB2 subsystem name |
| M - DB2 Administration | 2 | WTDD database name |
| M - DB2 Administration | 3 | WTDD tablespace name |
| M - DB2 Administration | 4 | WTDD tablespace storage group name |
| M - DB2 Administration | 5 | WTDD index storage group name |
| M - DB2 Administration | 6 | WTDD primary storage allocation |
| M - DB2 Administration | 7 | WTDD secondary storage allocation |
| M - DB2 Administration | 8 | WTDD table owner |
| M - DB2 Administration | 9 | WTDD select privileges |

*Table 7 (Page 1 of 4). Worksheet configuration points list, sorted alphabetically by line labele*

| Worksheet Line Label | Worksheet ID and Title | Line No. |
|---|---|---|
| Adapter number for host connection (0 or 1) | D - LAN Administration | 4-a |
| APPC major node name | A - Host Network Administration | 6 |
| CAS cataloged procedure name | J - MVS Systems Programming | 1 |
| CAS performance group number | J - MVS Systems Programming | 2 |
| Cataloged procedure name | I - MVS Systems Programming | 3 |
| Communications Manager/2 LU profile name | E - LAN Administration | 3 |
| Communications Manager/2 PU name | B - Host Network Administration | 4 |
| Communications Manager/2 PU name | D - LAN Administration | 3 |
| Communications Manager/2 SNA network name | D - LAN Administration | 2 |
| Data sets to concatenate to SYSPROC in addition to the temporary data set defined above | J - MVS Systems Programming | 8 |

*Table 7 (Page 2 of 4). Worksheet configuration points list, sorted alphabetically by line labele*

| Worksheet Line Label | Worksheet ID and Title | Line No. |
|---|---|---|
| DB2 load library names (if not in linklist) | K - MVS Systems Programming | 3 |
| DB2 subsystem name | M - DB2 Administration | 1 |
| DB2 thread creation (Connect or LUW) | L - DB2 Administration | 3 |
| Default DB2 subsystem name | L - DB2 Administration | 1 |
| IDS application plan name prefixes | L - DB2 Administration | 5 |
| IDS connect exit name | H - MVS Systems Programming | 12 |
| IDS data set high-level qualifier | H - MVS Systems Programming | 2 |
| IDS service manager cataloged procedure name | H - MVS Systems Programming | 9 |
| IDS service manager gateway-to-host application ID | A - Host Network Administration | 5 |
| IDS service manager host-to-gateway application ID | A - Host Network Administration | 4 |
| IDS service manager performance group number | H - MVS Systems Programming | 10 |
| IDS service manager status exit name | H - MVS Systems Programming | 11 |
| IDS SQL exit name | H - MVS Systems Programming | 13 |
| IDS SQL services cataloged procedure name | K - MVS Systems Programming | 1 |
| IDS SQL services performance group number | K - MVS Systems Programming | 2 |
| IDS subsystem command recognition character(s) | H - MVS Systems Programming | 4 |
| IDS subsystem name | H - MVS Systems Programming | 3 |
| IDS user SVC number | H - MVS Systems Programming | 5 |
| First in a series of IDS services host application ID names | C - Host Network Administration | 3 |
| Gateway ID | C - Host Network Administration | 1 |
| Gateway ID | E - LAN Administration | 1 |
| Gateway ID | F - IDS Administration | 1 |
| Gateway ID | I - MVS Systems Programming | 1 |
| Gateway service LAN adapter address | F - IDS Administration | 6 |
| Gateway service name | F - IDS Administration | 5 |
| Gateway type (CAS or DB2) | F - IDS Administration | 2 |
| Gateway type (CAS or SQS) | C - Host Network Administration | 2 |
| Gateway type (CAS or SQS) | I - MVS Systems Programming | 2 |
| Grant READ access to specified data sets for the service manage | G - MVS Security Administration | 4 |
| Grant READ access to specified data sets for PUBLIC | G - MVS Security Administration | 6 |

*Table 7 (Page 3 of 4). Worksheet configuration points list, sorted alphabetically by line labele*

| Worksheet Line Label | Worksheet ID and Title | Line No. |
|---|---|---|
| Grant UPDATE access to specified data sets for the service manager | G - MVS Security Administration | 5 |
| Host code page | H - MVS Systems Programming | 8 |
| Host Services version number | H - MVS Systems Programming | 1 |
| Host system LAN address | D - LAN Administration | 4-c |
| Host type (MVS) | F - IDS Administration | 3 |
| LAN type (Ethernet or Token-Ring) | D - LAN Administration | 4-b |
| Linklist library name | H - MVS Systems Programming | 7 |
| Link Pack Area library name | H - MVS Systems Programming | 6 |
| Logon mode table entry name | A - Host Network Administration | 3 |
| Logon mode table entry name | B - Host Network Administration | 3 |
| Logon mode table name | A - Host Network Administration | 2 |
| Logon mode table name | B - Host Network Administration | 2 |
| Number of services | C - Host Network Administration | 4 |
| Number of services | F - IDS Administration | 7 |
| PC identification number | D - LAN Administration | 1 |
| Permanent connection (Yes or No) | L - DB2 Administration | 2 |
| Realm name | F - IDS Administration | 4 |
| RU size (smallest maximum of any node) | B - Host Network Administration | 5 |
| SNA network name | A - Host Network Administration | 1 |
| SNA network name | B - Host Network Administration | 1 |
| SDLC station address | D - LAN Administration | 4-d |
| Security package (RACF, ACF2, or TOPSECRET) | G - MVS Security Administration | 1 |
| SVC caller verification | G - MVS Security Administration | 3 |
| SYSPROC temporary partitioned data set BLKSIZE | J - MVS Systems Programming | 7 |
| SYSPROC temporary partitioned data set LRECL | J - MVS Systems Programming | 6 |
| SYSPROC temporary partitioned data set RECFM | J - MVS Systems Programming | 5 |
| SYSPROC temporary partitioned data set SER | J - MVS Systems Programming | 4 |
| SYSPROC temporary partitioned data set UNIT | J - MVS Systems Programming | 3 |
| TP name prefix (CA or SQ) | E - LAN Administration | 2 |
| Use DEGREE ANY (Yes or No) | L - DB2 Administration | 4 |
| User ID translation enablement | G - MVS Security Administration | 2 |
| WTDD database name | M - DB2 Administration | 2 |
| WTDD index storage group name | M - DB2 Administration | 5 |

*Table 7 (Page 4 of 4). Worksheet configuration points list, sorted alphabetically by line labele*

| Worksheet Line Label | Worksheet ID and Title | Line No. |
|---|---|---|
| WTDD primary storage allocation | M - DB2 Administration | 6 |
| WTDD secondary storage allocation | M - DB2 Administration | 7 |
| WTDD select privileges | M - DB2 Administration | 9 |
| WTDD table owner | M - DB2 Administration | 8 |
| WTDD tablespace name | M - DB2 Administration | 3 |
| WTDD tablespace storage group name | M - DB2 Administration | 4 |

*Table 8. Worksheet list, sorted alphabetically by area of responsibility*

| Responsible person | Worksheet ID and Title |
|---|---|
| DB2 Database Administrator | L - DB2 Administration |
| DB2 Database Administrator | M - DB2 Administration |
| IDS Administrator | F - IDS Administration |
| IDS LAN Administrator | D - LAN Administration |
| IDS LAN Administrator | E - LAN Administration |
| MVS Security Administrator | G - MVS Security Administration |
| MVS Systems Programmer/Specialist | H - MVS Systems Programming |
| MVS Systems Programmer/Specialist | I - MVS Systems Programming |
| MVS Systems Programmer/Specialist | J - MVS Systems Programming |
| MVS Systems Programmer/Specialist | K - MVS Systems Programming |
| VTAM Specialist | A - Host Network Administration |
| VTAM Specialist | B - Host Network Administration |
| VTAM Specialist | C - Host Network Administration |

# Glossary

**abend**. (1) Abnormal end of task. (2) Synonym for abnormal termination.

**abnormal end of task (abend)**. Termination of a task before its completion because of an error condition that cannot be resolved by recovery facilities while the task is executing.

**abnormal end termination**. (1) The cessation of processing prior to planned termination. (2) A system failure oroperator action that causes a job to end unsuccessfully. (3) Synonymous with abend, abnormal end.

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

**address space**. (1) 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. (2) The range of addresses available to a workstation program.

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

**API**. *See* application program interface.

**APPC**. See Advanced Program-to-Program Communications.

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

**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 (API)**. 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**. *See* AS/400.

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

**asset**. See asset management.

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

**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. *See also* application plan.

**bit**. Either of the digits 0 or 1 when used in the binary numeration system. Synonymous with binary digit.

**byte**. A string that consists of a particular number of bits, usually eight, that is treated as a unit, and that represents a character.

**CAF**. *See*call attachment facility.

**call attachment facility (CAF)**. 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.

**CAS**. *See* Cooperative Application Services.

**CAS service address space**. *See* service address space.

**catalog**. (1) A directory of files and libraries, with reference to their locations. A catalog can contain other information such as the types of devices in which the files are stored, passwords, and blocking factors. (2) To enter information about a file or a library into a catalog. (3) The collection of all data set indexes that are used by the control program to locate a volume containing a specific data set. (4) To include the volume identification of a data set in the catalog. (5) In SQL, tables, maintained by the database manager, that contain descriptions of objects, such as tables, views, and indexes.


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**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.

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

**CLIST**. *See* command list.

**code page**. (1) 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. (2) A particular assignment of hexadecimal identifiers to graphic characters.

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

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

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

**Communications Manager/2**. A licensed IBM program that runs under the OS/2 operating system and lets a desktop connect to a host workstation and use the host resources as well as the resources of other personal computers to which the desktop is attached, either directly or through a host system.

**control statement**. (1) In programming languages, a statement that is used to alter the continuous sequential execution of statements; a control statement can be a conditional statement, such as *IF*, or an imperative statement, such as *STOP*. (2) *See* job control statement.

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

**Cooperative Application Services (CAS)**. A combination of desktop 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.

**CSA**. *See* common service area.

**DASD**. *See* direct access storage device.

**database administrator (DBA)**. 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.

**DATABASE 2**. *See* DB2.

**data definition statement**. *See* dd.

**Data Entry**. The tool that is used to enter, retrieve, delete, and update data on a database server, or to set @-variables in the *User Input Controls* window of a Capsule application.

**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**. (1) *See* database administrator. (2) A tool that allows a database administrator to define data types, structure, and arrangement in a logical database or Workstation Tools Data Dictionary (WTDD) and, from the logical definitions, create physical tables that will contain the actual data. *See also* Workstation Tools Data Dictionary.

**DB2**. DATABASE 2, an IBM relational database management system that runs on an MVS system.

**dd**. 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.

**desktop**. The screen space occupied by IDS. *See also* OS/2 desktop.

**direct access storage device (DASD)**. A device, such as a disk, in which access time is effectively independent of the location of the data.

**disable**. (1) To make nonfunctional. (2) In interactive communications, to disconnect or stop a subsystem. *Contrast with* enable.

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

**Distributed Relational Database Architecture(DRDA)**. 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.

**DRDA**. *See* Distributed Relational Database Architecture.

**DSN command processor**. The DB2 component that processes DB2 subcommands (such as *BIND*, *RUN*, and so on).

**dump**. (1) To record, at a particular instant, the contents of all or part of one storage device in another storage device. Dumping is usually for the purposes of debugging. (2) Data that has been dumped. (3) To copy data in a readable format from main or auxiliary storage onto an external medium such as tape, diskette, or printer. (4) To copy the contents of all or part of virtual storage for the purpose of collecting error information.

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

**ECSA**. *See* extended common service area.

**ELPA**. *See* Extended Link Pack Area.

**enable**. (1) To make functional (2) In interactive communications, to load and start a subsystem. *Contrast with* disable.

**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**. *See* execute (EXEC) statement.

**execute (EXEC) statement**. A job control language (JCL)statement that marks the beginning of a job step and identifies the program to be executed or the cataloged or in-stream procedure to be used.

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

**extended common service area (ECSA)**. In the MVS operating system, an extension to the common service area, which resides above the 16-Mbyte line. *See also* common service area.

**Extended Link Pack Area (ELPA)**. In the MVS operating system, an extension to the Link Pack Area, which resides above the 16-Mbyte line. *See also* Link Pack Area.

**file**. A collection of information stored as a unit on a disk or other storage media. *See also* data set, executable file, directory.

**Forms Design**. A tool used to create forms for data entry.

**gateway**. A software process that translates protocols and access methods between two dissimilar systems. *See also* access method.

**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. *See also* gateway.

**host service**. An IDS Host Services address space on the MVS host that controls access to DB2 on behalf of database gateways and users or Cooperative Application Services.

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

**IDS**. The IBM Intelligent Decision Server.

**initial program load (IPL)**. (1) The initialization procedure that causes an operating system to commence operation. (2) The process by which a configuration image is loaded into storage at the beginning of a work day or after a system malfunction. (3) The process of loading system programs and preparing a system to run jobs. (4) Synonymous with system restart, system startup.

**input/output (I/O)**. Pertaining to input, output, or both.

**input/output device**. Synonym for input/output unit.

**input/output unit**. (1) A device in a data processing system by means of which data can be entered into the system, received from the system, or both. (2) Synonymous with input/output device.

**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 (EXEC)statement.

**Interactive System Productivity Facility (ISPF)**. An IBM licensed program that serves as a full-screen editor and dialogue manager. Used for writing application programs, it provides a means of generating standard screen panels and interactive dialogues between the application programmer and terminal user.

**interface**. The software interface used for administering and managing a service.

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

**I/O**. *See* input/output.

**IPL**. *See* initial program load.

**ISPF**. *See* Interactive System Productivity Facility.

**JCL**. Abbreviation for 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.

**JES**. *See* job entry subsystem.

**job control language**. *See* JCL.

**job control statement**. A statement in a job that is used in identifying the job or describing its requirements to the operating system.

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

**KB**. *See* kilobyte; 1024 bytes. *See also* byte.

**kilobyte (KB)**. 1024 bytes. *See also* byte.

**LAN**. *See* local area network.

**legacy databases**. Older databases, sometimes of a design that pre-dates RDBMS technology.

**library**. (1) A file or a set of related files; for example, in stock control, a set of inventory control files. (2) A repository for demountable recorded media, such as magnetic disk packs and magnetic tapes. (3) A collection of functions, calls, subroutines, or other data. (4) A data file that contains files and control information that allows them to be accessed individually. (5) A named area on a disk that can contain programs and related information (not files). A library consists of different sections, called library members.

**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 (LPA)**. (1) In MVT, an area of main storage containing reenterable routines from system libraries. Their presence in main storage saves loading time. (2) In OS/VS2, an area of virtual storage that contains reenterable routines that are loaded at IPL time and can be used concurrently by all tasks in the system.

**local area network (LAN)**. A data communications network, spanning a limited geographical area, in which serial transmission is used for direct communication among computers or other devices. *See also* serial transmission.

**local network**. The network to which a specified user or resource is directly connected. *See also* remote network.

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

**logical unit (LU)**. 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. *Contrast with* physical unit.

**logical unit 6.2 (LU 6.2)**. A set of protocols and services defined by IBM's SNA for communication between application programs. *See also* Advanced Program-to-Program Communications (APPC).

**LPA**. *See* link pack area.

**LU**. *See* logical unit.

**LU-LU session**. In Systems Network Architecture (SNA)communications, a session between two logical units (LUs)in an SNA network. It provides communi-

cation between two end users, or between an end user and an LU services component.

**LU 62**. *See* logical unit 6.2.

**major node**. In VTAM programs, a set of resources that can be activated and deactivated as a group. *See also* node, minor node, switched major node.

**map**. To establish a set of values having a defined correspondence with the quantities or values of another set; for example, to evaluate a mathematical function, that is, to establish the values of the dependent variable for values of the independent variable or variables of immediate concern.

**member**. A file within of a partitioned data set.

**minor node**. In VTAM programs, a uniquely defined resource within a major node. *See also* node, major node.

**Multiple Virtual Storage/Enterprise Systems Architecture**. *See* MVS/ESA.

**MVS**. Multiple virtual storage. Implies the MVS/ESA product.

**MVS/ESA**. Multiple Virtual Storage/Enterprise Systems Architecture. An IBM MVS operating system environment that supports IBM S/390 and ES/9000. MVS/ESA allows an address space access to one or more data spaces. A data space is, like an address space, a virtual storage area. While an address space contains system programs, user programs, and data, a data space can contain only data. Each data space can provide up to two gigabytes (two billion bytes) of virtual storage for data. Data spaces can save time, prevent unintentional changes to data, and permit the sharing of data among selected users. So, in addition to the two gigabytes a job has available to it for holding instructions and data in an address space, each job can also have access to many data spaces.

**national character**. *See* national language character set.

**national language character set**. The letters, numbers, and special symbols that comprise the language of a particular country or area.

**NAU**. *See* network addressable unit.

**NCP**. *See* Network Control Program.

**network**. A set of workstations, servers, and other devices connected together for the interchange of information.*See also* local area network.

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

**Network Control Program (NCP)**. 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. *See also* major node, minor node.

**Operating System/2**. *See* OS/2.

**Operating System/400**. *See* OS/400.

**Operating System/Virtual Storage (OS/VS)**. A family of operating systems that control IBM System/360 and System/370 computing systems. OS/VS includes VS1, VS2, MVS/370, and MVS/XA.

**OS/2**. Operating System/2. A single-user, mulitasking, IBM operating system that runs on microcomputers with an Intel 80286 or later microprocessor.

**OS/400**. Operating System/400. The operating system for the IBM AS/400 workstation.

**OS/VS**. *See* Operating System/Virtual Storage.

**OS/VS2**. A virtual storage operating system that is an extension of OS/MVT.

**output**. The result of workstation processing.

**pacing**. *See* session-level pacing.

**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. *See also* data set, member.

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

**password**. A unique string of characters known to a workstation system and to a user, who must specify the character string to gain access to a desktop, gateway, database, system, or service within a system. *See also* user ID.

**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. *See also* OSI model.

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

**plan**. *See* application plan.

**PLU**. *See* 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.

**QMF**. Query Management Facility.

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

**Query**. A tool used to retrieve data from a database, based on specified conditions.

**RACF**. *See* resource access control facility.

**RDBMS**. *See* 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 rather 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, Internetwork Routing Service, 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 (RDBMS)**. 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. *See also* local network.

**Reporter**. A desktop tool used to retrieve data from a database, analyze it, and format it into a report that can be printed.

**resource access control facility (RACF)**. 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.

**REXX**. IBM's Restructured Extended Executor language, a command language in which scripts can be written for use in Cooperative Application Services and Global Access for VM.

**script**. *See* command script.

**SDLC**. *See* Synchronous Data Link Control.

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

**service request block (SRB)**. 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-to-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.

**session pacing**. *See* session-level pacing.

**SNA**. *See* Systems Network Architecture.

**SQL**. 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.

**SQL/DS**. The IBM Structured Query Language/Data System relational database management system that runs on a VM system.

**SQL Entry**. A tool used to run Structured Query Language (SQL) programs.

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

**SRB**. *See* service request block.

**Structured Query Language**. *See* SQL.

**Structured Query Language/Data System**. *See* SQL/DS.

**subsystem**. A secondary or subordinate system, usually capable of operating independently of, or asynchronously with, a controlling system.

**supervisor call (SVC)**. 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**. *See* supervisor call.

**switched major node**. In the VTAM program, a major node whose minor nodes are physical units and logical units attached by switched SDLC links. *See also* major node.

**Synchronous Data Link Control (SDLC)**. A discipline conforming to subsets of the Advanced Data Communication Control Procedures (ADCCP) of the American National Standards Institute (ANSI) and High-level Data Link Control (HDLC) of the International Organization for Standardization, for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges can be duplex or half-duplex over switched or nonswitched links. The configuration of the link connection can be point-to-point, multipoint, or loop.

**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 (SDSF)**. In the MVS and VM environments, a facility under ISPF that provides current information on the status of jobs, print queues, system resources, and the like. *See also* Interactive System Productivity Facility (ISPF).

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

**table**. In a database, a single file, consisting of data organized in columns and rows.

**Text**. A tool used to write and format text documents, format the results of data access tools, and receive data and images from other tools and PC applications.

**Time-Sharing Option (TSO)**. An MVS program product that provides interactive time sharing from local and remote terminals. *See also* Time-Sharing Option Extensions (TSO/E).

**Time-Sharing Option Extensions (TSO/E)**. (1) The base for all TSO enhancements. It provides MVS users with additional functions, improved usability, and better performance. (2) In the MVS/ESA environment, TSO/E also provides virtual storage constraint relief. *See also* Time-Sharing Option (TSO).

**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. *See also* token, node.

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

**TP**. *See* transaction program.

**transaction program (TP)**. 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.

**TSO**. *See* Time-Sharing Option.

**TSO/E**. *See* Time-Sharing Option Extensions.

**virtual machine (VM)**. (1) A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real processing system. (2) A system in which each user appears to have his own workstation and input/output devices. (3) A functional simulation of a workstation and its associated devices. Each virtual machine is controlled by a suitable operating system; for example, the conversational monitor system. VM/370 controls concurrent execution of multiple virtual machines on a single System/370 computing system. (4) In VM, a functional equivalent of either a System/370 computing system or a System/370-Extended Architecture computing system. Each virtual machine is controlled by an operating system. VM controls concurrent execution of multiple virtual machines on a single system.

**Virtual Telecommunications Access Method (VTAM)**. A set of programs that maintain control of the communication between terminals and application programs running under DOS/VS, OS/VS1 and OS/VS2 operating systems.

**VM**. *See* virtual machine.

**VTAM**. *See* Virtual Telecommunications Access Method.

**worksheet**. An IDS Host Services installation and configuration planning tool.

**workstation**. A computer at which the user can use IDS to perform work. Depending upon the model, desktop components include the monitor, keyboard, mouse, and system unit, which can house a disk drive.

**Workstation Tools Data Dictionary (WTDD)**. 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. *See also* print name.

**WTDD**. *See* Workstation Tools Data Dictionary.

# IDS Publications

This section lists IDS publications, including order numbers. To order copies of the books listed here, or to get more information about a book, see your IBM representative.

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*Getting Started with the Intelligent Decision Server* (SC26-8892)

*Working with the Intelligent Decision Server* (SC26-8893)

**Installation, Configuration, and Administration Publications**

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*Installing Host Services and Configuring Host-to-LAN Communications for MVS* (GC26-8881)

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# Index

## Numerics

3174 gateway, configuring connections for VTAM 26
3380 tracks, number needed for distribution data sets 20

## A

A01METP, sample APPC major node name shown in sample configuration file 29
ACF/VTAM, required version 20
Adapter number for host connection (0 or 1)
  Worksheet D 34
  Worksheet D line instructions 35
address space
  defined 9
  storage requirements
    CAS service 21
    service manager 21
    SQL service 21
address spaces
  name format for 22
  naming 22
  naming example 23
  storage requirements 21
administration
  IDS system 16
  LAN 16
AMODE link-edit setting, for Host Services programs 21
APPC 2
  communications between host and LAN 7
  conversation naming convention 28
  defining session parameters for VTAM
    RU size 31
  paths between Host Services and database gateway service 11
  protocol provided by LU 6.2 8
  session parameter 29
APPC major node name
  Worksheet A 28
  Worksheet A line instructions 29
APPL ID
  IDS subsystem name used as first four characters of 29
  service manager gateway-to-host 29
APPL ID *(continued)*
  service manager host-to-gateway 29
application IDs
  determining the number to be defined for VTAM 33
  entering first in a series of IDS services 33
  naming convention used for 33
asset management process 4
auxiliary storage requirements 19

## B

block size, for distribution data sets 20

## C

C
  runtime library 23
  runtime library error and warning messages 24
  scripts can use 1
  transient library routines, available for optional loading into LPA 22
CA prefix 22
CAF 5, 10
cancel requests
  carried by gateway-to-host communications path 28
  managed by gateway monitor process 4
CAS
  accessing applications from IDS workstations 1
  data access components 6
  defined 1
  service, function defined 6
CAS cataloged procedure name
  Worksheet J 41
  Worksheet J line instructions 46
CAS gateway type 33
CAS performance group number
  Worksheet J 41
  Worksheet J line instructions 46
CAS service address spaces
  function 10
  introduced 2, 9
  requirements 21
CAS sessions, controlling 3
CAS transformer
  concurrent openings limits for 10
  range of host software used with 1

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cataloged procedure name
specifying during configuration 22
used by Host Services address spaces 22
used by more than one gateway 22
Worksheet I 41
Worksheet I line instructions 45
cataloged procedure, naming for the service manager 22
CDRSC statements 26
class of service 8
CLIST
commands executed through TSO/E 6
executing in the same CAS service address space as TSO/E 10
procedure sent by desktop 2
procedures invoking cooperative application programs 6
CLIST libraries 46
command recognition character 43
commands
database gateway service 3
host interface 3
communications
between data access components 4
between data access tools and host 4
illustration
access path from IDS workstations to host 2
CAS communications system view 6
DB2 data access communications system view 4
service address space 9, 11
service manager address space for data access communications 12
management 16
communications interface 5
Communications Manager/2
APPC transmission service mode profile 31
Data Link Control (DLC) profile 35
data-link control profile 31
host connections 2
LAN profile 35
participating as an SNA network node 7
role in IDS 4
SNA base profile 31, 35
Communications Manager/2 LU profile name
Worksheet E 34
Worksheet E line instructions 37
Communications Manager/2 PU name
Worksheet B 28
Worksheet B line instructions 31
Worksheet D 34
Communications Manager/2 PU name *(continued)*
Worksheet D line instructions 35
Communications Manager/2 SNA network name
Worksheet D 34
Worksheet D line instructions 35
concatenation, SYSPROC 23
configuration information library (met.CONFIG), allocated by SYSPARM DD statement 24
connect exit name 43
control blocks, allocated by Host Services subsystem in ECSA 21
control logic, for building the WTDD 24
Control member (METCNTRL), MAXSERVICES parameter specified in 19
controlling sessions 3
conversation
defined 8
one session supporting many conversations 8
converting data and format 4
cross-domain
communications 31
resources 26
CTRANS DD statement 23

# D

data access components, examining communications between 4
Data Access Services
introduced 1
required software release 20
data access tools
using the WTDD to translate commands and data 5
data center planning 16
data conversion 4
data set name high-level qualifier 43
Data sets to concatenate to SYSPROC
Worksheet J 41
Worksheet J line instructions 46
data sets, disk space storage requirements for 20
data-link control profile, RU size used in Communication Manager's 31
database gateway service
converting protocols through 7
interface 3
rolein data access 1
using Communications Manager/2 to establish SNA sessions with 4
Database Gateway Services 1

database gateway, configuration file 33
database management 16
DB2
  accessing from IDS workstations 1
  address spaces 9
  Call Attach Facility (CAF) 5
  data access components 5
  required version 20
  sessions, controlling 3
DB2 administration
  Worksheet L 48
  Worksheet M 49
DB2 database administrator
  one of six areas of responsibility identified 16
  using Worksheet L 47, 48
  using Worksheet M 47, 49
  worksheet responsibilitie 66
  worksheet responsibilities 66
  worksheet responsibilities of 18
DB2 load library names
  Worksheet K 41
  Worksheet K line instructions 47
DB2 subsystem name
  Worksheet M 47
  Worksheet M line instructions 49
DB2 thread creation (Connect or LUW)
  Worksheet L 47
DCB attributes 23, 24
DD statements used in Host Services cataloged procedures 23
Default DB2 subsystem name
  Worksheet L 47
  Worksheet L line instructions 48
design review 15
desktop tools, using to send SQL statements 5
disk data sets 20
disk space, storage requirements 20
distribution data set sizes 20
DRDA, accessing non-DB2 databases through 3
DSNLOAD library, specified by DSNxxx DD statement 23
DSNxxx DD statements 23

# E

ECSA
  control blocks allocated by Host Services subsystem 21
  explicit allocations on behalf of Host Services 21
ELPA
  modules recommended for loading into 22
  service manager and service address space load modules in 24
Enterprise System/9000 1
Enterprise Tools, access to MVS data and applications accomplished through 1
ENUMSGS DD statement 23
ES/9000 1
Ethernet LAN
  connection between VTAM and database gateway service 26
  used as the physical medium for communications 5

# F

First in a series of IDS services host application ID names
  Worksheet C 28
  Worksheet C line instructions 33
format conversion 4

# G

gateway
  maintaining APPC conversations to the host 4
  managing
    allocation of internal processes through the monitor process 4
    cancel requests for 4
  relationship with service address spaces 9
Gateway ID
  Worksheet C 28
  Worksheet C line instructions 33
  Worksheet E 34
  Worksheet E line instructions 37
  Worksheet F 38
  Worksheet F line instructions 38
  Worksheet I 41
  Worksheet I line instructions 45
Gateway name
  Worksheet F 38
  Worksheet F line instructions 38
gateway service
  communications path to a service address space 9, 10
  relationship with service address spaces 11
  role in data access 1
Gateway service LAN adapter address
  Worksheet F 38

Gateway service LAN adapter address *(continued)*
Worksheet F line instructions 38
Gateway type (CAS or DB2)
Worksheet F 38
Gateway type (CAS or SQS)
Worksheet C 28
Worksheet C line instructions 33
Worksheet I 41
Worksheet I line instructions 45
Gateway type(CAS or DB2)
Worksheet F line instructions 38
gateway-to-host communications path 11
gateway-to-host communications path, configuring 28
gateways, running multiple gateways on a database gateway service 33
Grant READ access to specified data sets for PUBLIC
Worksheet G 40
Worksheet G line instructions 41
Grant READ access to specified data sets for the service manager
Worksheet G 40
Worksheet G line instructions 41
Grant UPDATE access to specified data sets for the service manager
Worksheet G 40
Worksheet G line instructions 41
GWA, as default DB2 gateway identifier 22, 33, 37
GWB, as default CAS gateway identifier 22

# H

hardware requirements 19
host administration 16
Host code page
Worksheet H 41
Worksheet H line instructions 43
host interface , 3
host network administration
Worksheet A 29
Worksheet B 31
Worksheet C 33
Host Services
address space name format 22
address spaces 9, 11
control blocks allocated to ECSA by subsystem 21
data set sizes 20
defined 1
library containing message text for 23
naming address spaces for 22
subsystem 11
Host Services *(continued)*
subsystem storage requirements 21
subsystems, more than one 22
Host Services version number
Worksheet H 41
Worksheet H line instructions 43
host services, residing in MVS address spaces 5
Host system LAN address
Worksheet D 34
Worksheet D line instructions 35
Host type
Worksheet F 38
Worksheet F line instructions 38
host workstation, configuring the "owner" of Communications Manager/2 31
host-to-gateway communications path 11
hot start, restoring the state of the service manager after 24

# I

IDBLK 35
IDNUM parameter, PC identification number used for 35
IDS
host administration 16
system administration of 16
IDS administration, Worksheet F 38
IDS administrator
contributing information for Worksheet I 45
one of six areas of responsibility identified 16
using data from Worksheet E 37
using Worksheet F 38
Worksheet F instructions for 38
worksheet responsibilities 66
worksheet responsibilities for 18
IDS application plan name prefixes
Worksheet L 47
Worksheet L line instructions 48
IDS connect exit name 43
Worksheet H 41
IDS data set high-level qualifier
Worksheet H 41
Worksheet H line instructions 43
IDS LAN administrator
contributing information for Worksheet I 45
one of six areas of responsibility identified 16
Worksheet D instructions for 35
Worksheet E instructions for 37
worksheet responsibilities for 18

IDS LAN administrator *(continued)*
worksheet responsibilities of 66
IDS OS/2 Database Gateway Service 1
IDS service manager cataloged procedure name
Worksheet H 41
Worksheet H line instructions 43
IDS service manager gateway-to-host application ID
Worksheet A 28
Worksheet A line instructions 28
IDS service manager host-to-gateway application ID
Worksheet A 28
Worksheet A line instructions 29
IDS service manager performance group number
Worksheet H 41
Worksheet H line instructions 43
IDS service manager status exit name
Worksheet H 41
Worksheet H line instructions 43
IDS SQL exit name
Worksheet H 41
Worksheet H line instructions 43
IDS SQL services cataloged procedure name
Worksheet K 41
Worksheet K line instructions 47
IDS SQL services performance group number
Worksheet K 41
Worksheet K line instructions 47
IDS subsystem command recognition character(s)
Worksheet H 41
Worksheet H line instructions 43
IDS subsystem name
Worksheet H 41
Worksheet H line instructions 43
IDS user SVC number
Worksheet H 41
Worksheet H line instructions 43
installation
complexity of 15
database gateway services 3
planning for DB2 data access in an MVS environment 12
interface 11
database gateway service interface 3
host interface 3
Internal Status Report, reporting control blocks allocated to ECSA 21
IOBUF parameter 26

# L

LAN administration 16
defined 16
Worksheet D 35
Worksheet E 37
LAN major node, defined for VTAM 26
LAN type (Ethernet or Token-Ring)
Worksheet D 34
Worksheet D line instructions 35
libraries, REXX and CLIST 46
library, configuration information 24
limiting sessions between LUs 8
Link Pack Area library name
Worksheet H 41
Worksheet H line instructions 43
Linklist library name
Worksheet H 41
Worksheet H line instructions 43
load modules, for service manager and service address spaces 24
Local LU definitions, SNA network name used in Communications Manager's 31
logging messages
carried by SRBs across address spaces 11
writing to SYSLOG 24
logical database 5
Logical Unit 6.2 (LU 6.2) 2
Logon mode table entry name
Worksheet A 28
Worksheet A line instructions 29
Worksheet B 28
Worksheet B line instructions 31
Logon mode table name
Worksheet A 28
Worksheet A line instructions 29
Worksheet B 28
LPA
C transient library routines available for optional loading into 22
see also Link Pack Area library name 22
storage requirements for optional modules 22
LSCARGP routine 22
LSCDIND routine 22
LSCDMGR routine 22
LSCOSEQ routine 22
LSCOTERM routine 22
LSCSIO routine 22
LU
defined 8

LU *(continued)*
specifying the name of a remote 8
supporting sessions with multiple LUs 8
LU 6.2 protocol 2, 8
LU-to-LU session 8
LUW, DB2 interface software opening a thread when LUW begins 10

# M

main storage requirements 19
major nodes, defining for VTAM 26
MAXBFRU parameter 26
MAXSERVICES parameter 19
memory, see storage 19
MET.AUTHLIB data set 20
MET.CHKPOINT data set 20
MET.CONFIG data set 20
MET.DBRMLIB data set 20
MET.JCL data set 20
MET.LOAD data set 20
MET.LPALIB data set 20
MET.MACLIB data set 20
MET.MVSENU data set 20
met.REXXLIB 24
MET.REXXLIB data set 20
MET.RUNTIME data set 20
MET.SAMPLIB data set 20
MET.SQLMACRO data set 20
METCAAPI module 22
METCAS module 22
METCAS sample CAS service address space procedure 23
METCASIN 24
METCASIN DD statement 23
METCASRX member 24
METCASRX procedure 24
METCNCTX 43
METCNTRL sample service manager address space procedure 23
METFCLOS module 22
METFGET module 22
METFOPEN module 22
METFPUT module 22
METGWA01 sample application ID used on the distribution tape 33
METMDSP module 22
METMGET module 22
METMODE
sample logon mode table entry name 29
METMODE *(continued)*
sample logon mode table entry name shown in the sample configuration file 31
METMODET, sample logon mode table name 29, 31
METP, default subsystem name 22
METPGTH, sample service manager gateway-to-host application ID 29
METPHTG, sample IDS service manager host-to-gateway host application ID 29
METSQS
cataloged procedure name 22
module 22
sample SQL service address space procedure 23
METSTATR, sample exit routine 43
migration, from a working configuration to a more complex one 15
minor node name
used by service manager for gateway-to-host communications 28
used by service manager for host-to-gateway communications 29
monitor process 4
monitoring
DB2 sessions 3
sessions 3
multiple host systems or VTAMs 26
MVS
host planning worksheets, introduced 40
host, directly connecting to database gateway service 31
required operating system and version 20
security administration
Worksheet G 41
security administration, Worksheet G 40
security administrator
one of the six areas of responsibility identified 16
using Worksheet G 40
worksheet responsibility for 18, 66
systems programming
Worksheet H 43
Worksheet I 45
Worksheet J 46
Worksheet K 47
MVS systems programmer/specialist
one of six areas of responsibility identified 16
using the MVS systems programming worksheets 41
using Worksheet I 45
using Worksheet J 46

MVS systems programmer/specialist *(continued)*
using Worksheet K 47
Worksheet H instructions for 43
worksheet responsibilities 66
worksheet responsibility of 18
MVS/ESA, required version 20
MYSANET SNA network name 35

# N

naming conventions 23
NCP
configuration considerations 25
configuring with information from Worksheet C 33
versions supported 20
NDF, Communications Manager/2 PU name used in 31
network addressable unit 8
Network Control Program, see NCP 33
Network Definition File, see NDF 31
network management 16
network node 7
network planning
communications management 16
data center management 16
security administration 16
skills required 16
systems programming 16
worksheets, introduced 28
network troubleshooting 16
network tuning 16
node, SNA network 7
nodes, defining for VTAM 26
Number of services
Worksheet C 28
Worksheet C line instructions 33
Worksheet F 38
Worksheet F line instructions 38

# O

operating system
required for MVS 19
required for MVS environment 20
optional Link Pack Area (LPA) modules 22
OS/2 Database Gateway Service, one of several IDS database gateway service types 1
OS/2, familiarity with 16
owner of Communications Manager/2, configuring host 31

# P

pacing levels 8
parallel sessions 8
partner application ID definition, logon mode table entry name used in Communication Manager's 29, 31
PC identification number
Worksheet D 34
Worksheet D line instructions 35
PC system, defining as a unique SNA network node 35
Permanent connection (Yes or No)
Worksheet L 47
Worksheet L line instructions 48
physical database 5
planning
services offered by IBM 15
worksheets
for MVS host configuration points 40
for network configuration points 28
planning for
Host Services installation and configuration 12
IDS installation 15
PU 2.1 communications protocol 25
PU name, entering Communications Manager's PU as defined for VTAM 31
PUGWA, sample Communications Manager PU name 31
PUs
defining to VTAM 35

# Q

QMF 1

# R

re-entrant programs 21
Realm name
Worksheet F 38
Worksheet F line instructions 38
REGION parameters, for Host Services address spaces 21
release levels, minimum required 20
restarting a connection 4
restore, service manager after a hot start 24
REXX
CAS allows users to work with 1
commands executed through TSO/E 6
executing in the same CAS service address space as TSO/E 10

REXX *(continued)*
incoming procedures 46
libraries 46
procedures invoking cooperative application programs 6
temporary library 46
RMODE link-edit setting for Host Services programs 21
RU size (smallest of any node)
Worksheet B 28
Worksheet B line instructions 31

# S

sample configuration data set (met.CONFIG) 19
sample exit routine, METSTATR 43
SDLC
connection between host and database gateway service 2
defining major nodes for VTAM 26
SDLC station address
Worksheet D 34
Worksheet D line instructions 35
security
administration 16
parameters 8
Security package (RACF, ACF2, or TOPSECRET)
Worksheet G 40
Worksheet G line instructions 41
service address space
introduced 2
start and stop commands 28
service address spaces
communications path into 9, 10
exchanging data with a database gateway service 9, 10
one set for each gateway 9
separate set for each gateway service 11
specifying the maximum that a service manager can start 19
using one for each connection to a
CAS transformer 10
data access tool 9
service manager
address space requirements 21
function in maintaining CAS sessions 6
specifying maximum service address spaces to be started by 19
service manager address space
communications path into 11
communications path to the database gateway service 11
service manager address space *(continued)*
controlling service address spaces with 11
introduced 9
naming the 22
naming the cataloged procedure name for 22
one required for each Host Services subsystem 22
purpose of 11
session
defined 8
limits 8
mode name 8
parallel 8
supporting more than one concurrently 8
session parameter definition, logon mode table entry name to be assigned as 31
session process 4
sessions
establishing through Communications Manager/2 4
running multiple 4
skills
IDS host administration 16
network management 16
network troubleshooting 16
SNA
APPC communications, understanding 7
connection between host and database gateway service 2
network node 7
SNA network name
Worksheet A 28
Worksheet B 28
Worksheet B line instructions 31
software requirements 20
SQ prefix 22
SQL exit name 43
SQL service address spaces
function 9
introduced 2, 9
SQL service, address space requirements 21
SQL statements, for building the WTDD 24
SQL/DS, accessing data through DRDA 3
SQLMACRO DD statement 24
SQS gateway type 33
SRBs, used to carry operator commands to service address spaces 11
start commands, for service address spaces 28
STEPLIB DD statement 23, 24
stop commands, for service address spaces 28
storage
auxiliary 19

storage *(continued)*
main 19
storage requirements 19
address spaces 21
disk space 20
disk space for distribution data sets 20
optional Link Pack Area (LPA) modules 22
subsystem 21
subsystem
more than one 22
name 43
storage requirements 21
SVC caller verification
Worksheet G 40
Worksheet G line instructions 41
switched major node, defined for VTAM 26
switched network nodes 26
SYS1.VTAMLST
IDNUM parameter in the major node definition placed into 35
VTAM major node member name in 29
SYSCHKPT DD statement 24
SYSCOMP DD statement 24
SYSLOG DD statement 24
SYSPARM DD statement 24
SYSPROC concatenation 23
SYSPROC DD statement 23, 24, 46
SYSPROC temporary partitioned data set BLKSIZE
Worksheet J 41
Worksheet J line instructions 46
SYSPROC temporary partitioned data set LRECL
Worksheet J 41
Worksheet J line instructions 46
SYSPROC temporary partitioned data set RECFM
Worksheet J 41
Worksheet J line instructions 46
SYSPROC temporary partitioned data set SER
Worksheet J 41
Worksheet J line instructions 46
SYSPROC temporary partitioned data set UNIT
Worksheet J 41
Worksheet J line instructions 46
system administration 16
systems programming 16
SYSTERM DD statement 24
SYSTERMI DD statement 24
SYSTSIN DD statement 24
SYSTSPRT DD statement 24

# T

tablespace for WTDD
database name 49
name of 49
primary storage size 49
secondary storage size 49
temporary REXX library 46
text, library for Host Services messages 23
token-ring LAN
connection between VTAM and database gateway service 26
used by IDS database gateway service 5
TP
defined 7
using the Gateway ID to form the name of a 33
TP name prefix (CA or SQ)
Worksheet E 34
Worksheet E line instructions 37
tracing messages, local to service address space 11
tracks, number needed for distribution data sets 20
Transmission Service Mode definition
logon mode table entry name used in Communication Manager's 31
session parameter definition used in MVS host 29
TSO/E
executes in a CAS service address space 10
required version 20
REXX or CLIST commands executed through 6

# U

Use DEGREE ANY, Worksheet L line instructions 48
User ID translation enablement
Worksheet G 40
Worksheet G line instructions 41

# V

VTAM
configuration considerations 25
connections, configuring with information from Worksheet C 33
definitions
3174 connections 26
Communications Manager/2 25
defining the service manager host-to-gateway host APPL ID 29
logon mode table name used in 31
LUs 25
MAXBFRU parameter 26

VTAM *(continued)*
definitions *(continued)*
PUs 25, 35
SDLC connections 26
token-ring connections 26
establishing SNA sessions and APPC conversations through 4
IDS resources 25
major node name, entered on Worksheet A 29
minor node name
used by service manager for host-to-gateway communications 29
used on Worksheet A 28
multiple host systems or VTAMs 26
required version 20
VTAM specialist
contributing information for Worksheet I 45
cooperating with LAN administrator to complete Worksheet D 35
one of six areas of responsibility identified 16
Worksheet A instructions for 29
Worksheet A overview for 28
Worksheet B instructions for 31
Worksheet B overview for 28
Worksheet C instructions for 33
Worksheet C overview for 28
worksheet responsibilities 66
worksheet responsibilities for 18, 66

# W

watchdog process 4, 6
Worksheet A\
Host Network Administration 28, 29
Worksheet B\
Host Network Administration 28, 31
Worksheet C\
Host Network Administration 28, 33
Worksheet D\
LAN Administration 34, 35
Worksheet E\
LAN Administration 34, 37
Worksheet F\
IDS Administration 38
Worksheet G\
MVS Security Administration 40, 41
Worksheet H line instructions 43
Worksheet H\
MVS Systems Programming 41, 43
Worksheet I\
MVS Systems Programming 41, 45
Worksheet J\
MVS Systems Programming 41, 46
Worksheet K\
MVS Systems Programming 41, 47
Worksheet L\
DB2 Administration 47, 48
Worksheet M\
DB2 Administration 47, 49
worksheet templates
for host planning 58
for network planning 51
worksheets
assembling 18
distributing 18
for host network administration 28
using for MVS host configuration planning 40
using for network configuration planning 28
workshops
leading 18
planning 15
WTDD database name
Worksheet M 47
Worksheet M line instructions 49
WTDD index storage group name
Worksheet M 47
Worksheet M line instructions 49
WTDD primary storage allocation
Worksheet M 47
Worksheet M line instructions 49
WTDD secondary storage allocation
Worksheet M 47
Worksheet M line instructions 49
WTDD select privileges
Worksheet M 47
Worksheet M line instructions 49
WTDD table owner
Worksheet M 47
Worksheet M line instructions 49
WTDD tablespace name
Worksheet M 47
Worksheet M line instructions 49
WTDD tablespace storage group name
Worksheet M 47
Worksheet M line instructions 49
WTDD, purpose of 5

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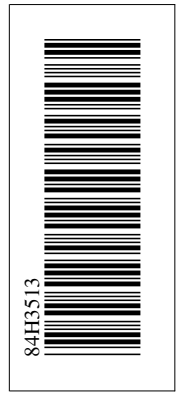
recovered post-consumer fiber.

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