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MANUAL REVISION HISTORY

DNOS DNCS Operations Guide (2302662-9701)

Original Issue	15 April 1982
Revision	1 February 1983
Revision	15 December 1983

The total number of pages in this publication is 270.

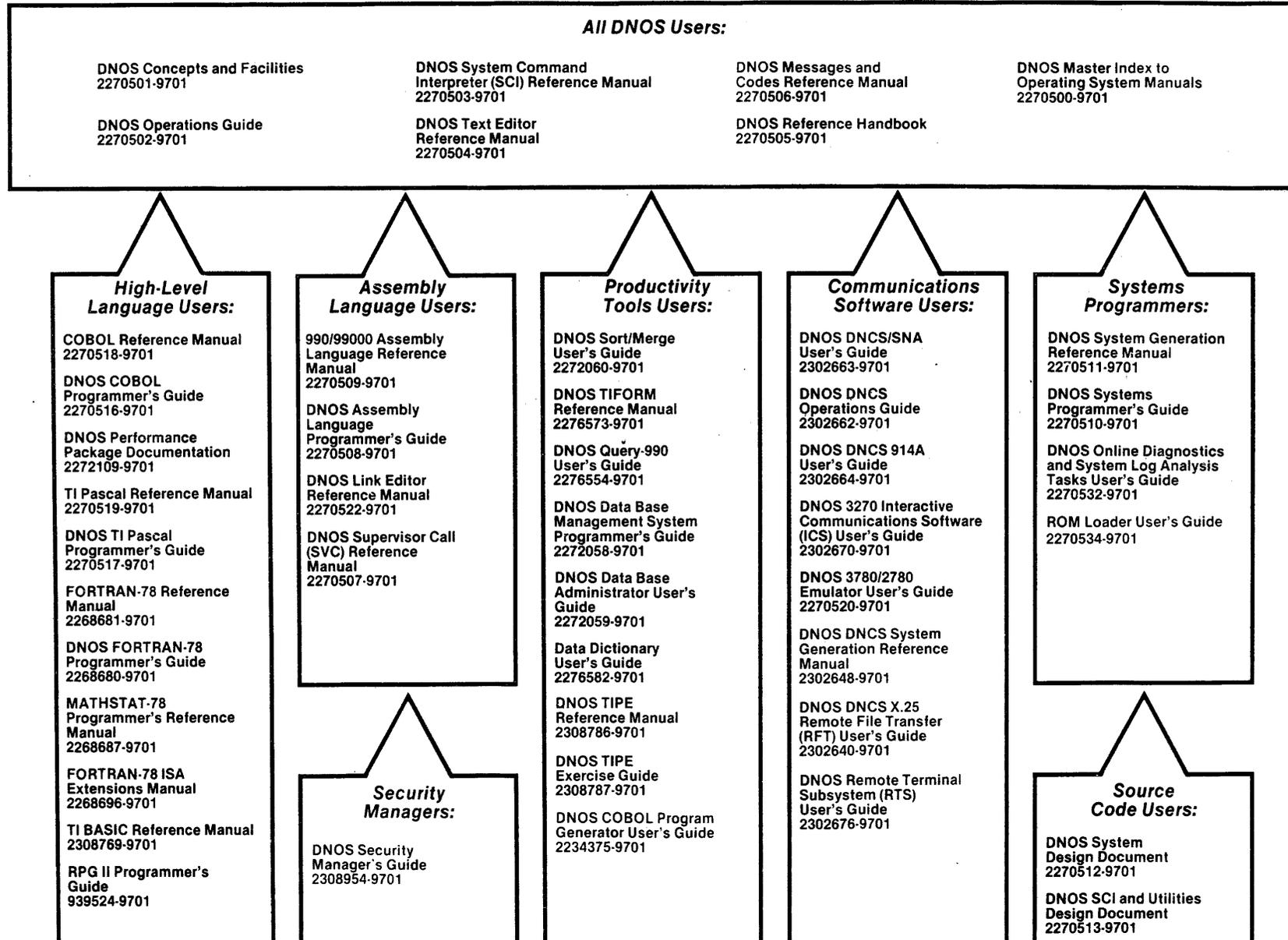
The computers offered in this agreement, as well as the programs that TI has created to use with them, are tools that can help people better manage the information used in their business; but tools—including TI computers—cannot replace sound judgment nor make the manager's business decisions.

Consequently, TI cannot warrant that its systems are suitable for any specific customer application. The manager must rely on judgment of what is best for his or her business.

DNOS Software Manuals

This diagram shows the manuals supporting DNOS, arranged according to user type. Refer to the block identified by your user group and all blocks above that set to determine which manuals are most beneficial to your needs.

2302662-9701



DNOS Software Manuals Summary

Concepts and Facilities

Presents an overview of DNOS with topics grouped by operating system functions. All new users (or evaluators) of DNOS should read this manual.

DNOS Operations Guide

Explains fundamental operations for a DNOS system. Includes detailed instructions on how to use each device supported by DNOS.

System Command Interpreter (SCI) Reference Manual

Describes how to use SCI in both interactive and batch jobs. Describes command procedures and gives a detailed presentation of all SCI commands in alphabetical order for easy reference.

Text Editor Reference Manual

Explains how to use the Text Editor on DNOS and describes each of the editing commands.

Messages and Codes Reference Manual

Lists the error messages, informative messages, and error codes reported by DNOS.

DNOS Reference Handbook

Provides a summary of commonly used information for quick reference.

Master Index to Operating System Manuals

Contains a composite index to topics in the DNOS operating system manuals.

Programmer's Guides and Reference Manuals for Languages

Contain information about the languages supported by DNOS. Each programmer's guide covers operating system information relevant to the use of that language on DNOS. Each reference manual covers details of the language itself, including language syntax and programming considerations.

Performance Package Documentation

Describes the enhanced capabilities that the DNOS Performance Package provides on the Model 990/12 Computer and Business System 800.

Link Editor Reference Manual

Describes how to use the Link Editor on DNOS to combine separately generated object modules to form a single linked output.

Supervisor Call (SVC) Reference Manual

Presents detailed information about each DNOS supervisor call and DNOS services.

DNOS System Generation Reference Manual

Explains how to generate a DNOS system for your particular configuration and environment.

User's Guides for Productivity Tools

Describe the features, functions, and use of each productivity tool supported by DNOS.

User's Guides for Communications Software

Describe the features, functions, and use of the communications software available for execution under DNOS.

Systems Programmer's Guide

Discusses the DNOS subsystems and how to modify the system for specific application environments.

Online Diagnostics and System Log Analysis Tasks User's Guide

Explains how to execute the online diagnostic tasks and the system log analysis task and how to interpret the results.

ROM Loader User's Guide

Explains how to load the operating system using the ROM loader and describes the error conditions.

DNOS Design Documents

Contain design information about the DNOS system, SCI, and the utilities.

DNOS Security Manager's Guide

Describes the file access security features available with DNOS.

Preface

This guide describes the operation of the Texas Instruments Distributed Network Communication System (DNCS). It identifies the role of the DNCS network operator and contains detailed instructions for many common operations.

This guide is written for the DNCS network operator who is the intended user of this document. The DNCS network operator should be familiar with DNCS concepts and facilities, DNOS, and SCI.

Individual sections and appendixes provide the following discussions:

Section

- 1 Introduction to DNCS Operations — Provides an overview of DNCS and the duties of the DNCS network operator.
- 2 DNCS SCI Commands — Describes System Command Interpreter (SCI) commands installed with the DNCS nucleus.
- 3 DNCS Command Interpreter (CI) — Describes the commands that display and modify the status of resources controlled by DNCS.
- 4 DNCS Operations — Provides step-by-step instructions for performing common DNCS operations, including activation, termination, resource management, and security.
- 5 DNCS SVQ Utility — Describes the utility that queues DNOS/DNCS tasks for execution at a delayed time.
- 6 Troubleshooting for DNCS — Identifies the techniques for diagnosing and correcting problems that arise during DNCS operation.

Appendix

- A DNCS CI Messages — Lists and explains the messages that result from DNCS CI commands.
- B DNCS Log Messages — Lists and explains the messages logged onto the DNCS log file.
- C Modifying DNCS SCI Commands — Describes DNCS SCI command logic and discusses possible modifications to specific SCI commands.

The frontispiece identifies the 990 computer manuals that provide related information for the DNCS operator.

NOTE

This manual contains information concerning the TI 914A data terminal. Although TI no longer sells this terminal, 914A terminal support for DNCS is available. This allows current 914A terminal customers to migrate to DNCS and Systems Network Architecture (SNA) networks.

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Introduction to DNCS Operations

1.1 DNCS OVERVIEW

The Texas Instruments Distributed Network Communication System (DNCS) provides the networking capability for the Distributed Network Operating System (DNOS). Benefits of networking include access to remote sites and resource sharing at the local site. Together, DNOS and DNCS provide a cost-effective method for moving data across common carrier or packet-switching networks.

DNCS is a system of hardware and software working together to provide a distributed approach to data communications. Distributed processing improves flexibility and responsiveness by locating terminals near the user. The following paragraphs discuss the software and hardware components of DNCS.

1.1.1 DNCS Software Description

Currently, DNCS consists of a nucleus and three add-on packages. Together the nucleus and add-on packages allow users of Texas Instruments computers to participate in networks that conform to the Systems Network Architecture (SNA), and/or to the International Standards Organization (ISO) open systems interconnection (OSI) model. In addition to the add-on packages available, the DNOS X.25 Network I/O (NIO) package can use the DNCS X.25 communication facility. (Future additions to the DNCS family will support additional networking systems and the expanding line of Texas Instruments terminal devices.)

The following briefly describes the nucleus and each add-on package:

- **DNCS Nucleus** — Provides the basic communication software that allows a DNOS-equipped system to function in the network. The DNCS nucleus provides the following capabilities:
 - A generation utility to configure DNCS according to add-on packages and user requirements
 - The DNCS Command Interpreter (DNCS CI), which allows the user to monitor and control the status of resources in the configuration
 - A common input/output (I/O) interface, the physical device control task (PDCT), through which all I/O to and from DNCS passes
 - The service queue (SVQ), a work scheduling utility that provides time-delayed execution of requests, provides an alternate means of accessing an SNA host, and frees terminals for other foreground or background activity

- **DNCS/SNA** — Consists of a set of emulators that enable users of TI equipment to access applications on a remote SNA host. In an SNA environment, the Texas Instruments computer serves as a cluster controller, and Texas Instruments terminals and printers serve as SNA display stations and printer stations. DNCS/SNA also supports disk files as printer stations, and user-written programs as printer or display stations. See the *DNOS DNCS/SNA User's Guide*.
- **914A terminal support** — Permits 914A terminals to participate in an SNA network. See the *DNOS 914A Terminal Support User's Guide*.
- **X.25 RFT** — The DNCS X.25 Remote File Transfer (RFT) system is used in networks that conform to the OSI model. It provides the means to transfer files between Texas Instruments computers either via public packet-switching networks (PSNs) conforming to the Consultative Committee on International Telephone and Telegraph (CCITT) recommendation X.25 or via leased lines. See the *DNCS X.25 Remote File Transfer (RFT) User's Guide*.

1.1.2 DNCS Hardware Description

Basic systems consisting of the DNCS nucleus have the following hardware components:

- Texas Instruments DS990 Model 4 (or above) and the Business System 300 (or above) computer systems, equipped with at least 512K (K = 1024) bytes of memory
- System disk (DS10 or larger) and backup
- Texas Instruments video display terminals (VDTs)
- Line printers or other sequential, file-oriented devices (optional)
- Synchronous modem and a switched/leased line for physical access to the network
- Communications controllers, such as:
 - CP501 bit-oriented/character-oriented asynchronous interface module (BCAIM)
 - CP502 X.21 BCAIM
 - CP503 four-channel communications controller (FCCC)
 - CI421 (Alpha) synchronous port for the Business System 300 computer

NOTE

Since January 1983, the Texas Instruments *Computer Family Catalog* uses new names for several communications products. BCAIM appears in the catalog as CP501. The X.21 BCAIM appears in the catalog as CP502. The FCCC appears in the catalog as CP503. The Alpha appears in the catalog as CI421. This guide uses the new names, but also refers to the common abbreviations for these communications products. In correspondence or formal discussions concerning system configurations, refer to the catalog names.

1.2 DNCS NETWORK OPERATOR

The DNCS network operator is the individual responsible for the following:

- Monitoring system performance
- Managing system resources
- Helping terminal operators use the system
- Diagnosing and handling errors

This guide provides the information necessary for DNCS network operators to do their job. The following paragraphs describe the tools that the DNCS network operator uses to operate the DNCS network:

- DNCS SCI commands
- DNCS operator interface (DNCS CI)
- Security systems
- DNCS log
- Information sources

1.2.1 DNCS SCI Commands

SCI commands installed with the DNCS nucleus fall into the following three groups:

- Commands that allow you to execute DNCS, terminate DNCS, and access the user interface using DNCS CI commands. These commands are described in Section 2. DNCS CI commands are described in Section 3.
- Commands that provide access to the user interface through SCI, allowing you to display and manage DNCS resources. These commands are described in Section 2.
- Commands that operate and maintain the SVQ utility. These commands are described in Section 5.

1.2.2 DNCS Operator Interface

The operator interface to DNCS is the DNCS Command Interpreter (DNCS CI), which allows you to display and manage network resources. The DNCS operator interface executes CI primitive commands in the form [command verb] <resource modifier> [resource] <display modifier>, as described in Section 3. DNCS CI is a general-purpose operator interface that supports the full range of product packages available under DNCS. Although commands relating to SNA specific or RFT specific resources are included in the standard nucleus package, they can produce error messages if used when these resources are not part of your configuration. There are two main paths to DNCS CI: the nucleus interface and the Emulator interface.

1.2.2.1 Nucleus Interface. The nucleus interface is useful on systems running RFT, where the SNA Emulators may not be part of the configuration. The nucleus interface requires that DNCS CI be defined in the configuration as a station/resource of type CIRES with a CI circuit. This method of accessing DNCS CI uses the task EMSCI to pass commands over the CI circuit to the station CIRES. Any DNOS terminal with access to SCI can access DNCS CI by this method using either the network commands or the XCI command, both described in Section 2. The primary difference between using XCI and using the network commands is that XCI requires you to enter the DNCS CI primitives, described in Section 3, while the network commands prompt you for the command you want to issue, then build a character string of DNCS CI primitives based on your responses. The network commands can do most of the functions performed by XCI and in many cases can save keystrokes (for example: the network command SCIR is identical to the DNCS CI command Display Circuit). The network commands cannot perform some of the functions relating to SNA specific resources.

1.2.2.2 Emulator Interface. The SNA Emulator interface to DNCS CI is useful at sites running the SNA Emulator package, where the nucleus interface may be inconvenient or unavailable. The Emulator interface requires that at least one VDT2, KSR, or 914A station be defined in the system configuration. It is not necessary to define a CIRES station with a CI circuit. The Emulator interface uses the Emulator Interprocess communication (IPC) channels to access DNCS CI directly. Printer emulators and programmed station control (PSC) stations cannot access DNCS CI, as these devices are not interactive. Terminals accessing DNCS CI through the Emulator interface use the commands described in Section 3.

1.2.2.3 Operator Interface Configuration Requirements. When planning your configuration, you have a choice of allowing access to DNCS CI through either the nucleus interface, Emulator interface, or both. However, at least one of these methods should be available to allow you to monitor system performance, manage system resources, and diagnose problems as they arise. If your system configuration does not include the SNA Emulators, then you must define a resource of type CIRES with a CI circuit. If you do not wish to use the nucleus interface, then you must have at least one VDT2, KSR, or 914A station defined in your configuration. See the *DNOS DNCS System Generation Reference Manual* for more information.

1.2.3 Security Systems

Because DNCS CI commands can start and stop the resources controlled by DNCS, some sites may wish to restrict access to these commands. DNCS provides two means for doing so, corresponding to the two interfaces to CI. Security can be provided through the nucleus interface by changing the SCI command privilege levels. Security can be provided through the Emulator interface by using the DNCS password. The DNCS password also affects access through the nucleus interface.

Access to DNCS CI commands through the nucleus interface can be controlled by raising the privilege level of some or all of the network SCI commands to the level usually reserved for the system operator, seven for example, and by ensuring that all other users have lower, five for example, privilege levels. You could raise the assign (ACIR, APMG) and modify (MRES) commands to seven and still allow the users access to the show commands. The XCI command should also be secured, as this grants access to all DNCS CI commands. However, this still leaves free access to DNCS CI from terminals running the SNA Emulators.

Access to DNCS CI through the Emulator interface can be controlled by use of the DNCS password. All DNCS CI commands except Log On, Log Off, Download, and Display can be secured by the DNCS password. A user must present the DNCS password as part of the command syntax to issue a secured command. The DNCS password must also be entered in response to the DNCS PASSWORD prompt of the network SCI commands. This method ensures that only users who know the DNCS password can issue secured DNCS CI commands. However, the Log On, Log Off, Download, and Display commands cannot be secured by this method. They can be secured from the nucleus interface using the SCI privilege level, but they cannot be secured at all from terminals running the SNA Emulators.

These security methods may be used individually or in combination to provide various levels of security for DNCS CI commands. Privilege levels and the SCI security system are described in detail in the *DNOS System Command Interpreter (SCI) Reference Manual*. The DNCS password is discussed in Section 3 of this manual.

1.2.4 DNCS Log

Many DNCS messages appear in the DNCS log, a relative record file automatically created during DNCS activation. The log provides a record of DNCS activity for use in troubleshooting and assessing system performance. The log resides on the DNCS system volume and has the path-name <DNCS>.\$DNCS.LOG, where <DNCS> represents the volume assigned during DNCS system generation.

DNCS maintains two generations of the log. When activated, DNCS copies the log to an archive file (<DNCS>.\$DNCS.LOG1), replacing the previous archival copy. Then, it clears the log file and writes log messages there until deactivated. You can display the DNCS log using the DNCSLOG command.

1.2.5 Information Sources

This guide provides much of the information required to operate DNCS. However, it does not attempt to document all facets of DNCS. For certain information, the network operator must rely on other publications and individuals.

The Frontispiece lists the DNOS and DNCS manuals that contain general information for the network operator. However, those manuals do not provide details on the implementation of DNCS in a particular user environment. This information falls into the following two classes:

- Information about the local system environment
- Information about the network environment

Information about the local system environment comes from the DNOS manuals listed in the Frontispiece and from the DNOS system operator. The DNOS system operator can provide information about the DNOS system configuration, resources available to DNCS, and DNOS system operating procedures. Information about DNCS add-on packages can be found in the DNCS manuals listed in the Frontispiece. Additional sources of information are the release information (shipped with the product installation medium) and the customer representative. The file of release information provides data related to the current product release and should be read before beginning the installation. The customer representative is an individual serving as the software support coordinator for the DNCS vendor. This person aids in troubleshooting problems that cannot be solved on site. The customer representative also assists in interpreting internal errors and preparing software trouble reports (STRs).

Information about the network environment concerns remote systems and applications accessed by DNCS users. The network environment can be either an SNA network or an X.25 PSN.

Information about the SNA network comes from the SNA network administrator, the individual responsible for the generation and operation of the SNA network at the host site. This individual can provide information about the SNA resources available to DNCS when it functions as an intelligent cluster controller in the SNA network and about procedures for accessing applications on the SNA host. This information covers logging on and off, entering data (or issuing transactions), and handling errors detected by the SNA host. Many applications have user manuals to provide this information, and often there is an application administrator responsible for the performance of the application.

Information about the X.25 PSN comes from the network authority. The *DNOS DNCS X.25 Remote File Transfer (RFT) User's Guide* has a list of PSNs for which DNCS is certified and describes how to contact the network authority to obtain information about a subscription to the network.

1.3 COMPONENT TYPES AND NAMES

DNCS configurations consist of interrelated components functioning together. The following definitions explain the various component types and the terms used to describe them in DNCS messages and documentation:

Node

From the standpoint of the SNA host (an IBM mainframe), the DNCS system is a node in the SNA network. In the language of SNA, each node consists of one physical unit (PU) and one or more logical units (LUs) housed together at a single point in the network. Under DNCS, the node name is the name of the DNCS system, and the node can house multiple PUs.

The Display Node command (see Section 3) uses the keyword NODE in a somewhat different way. In this case, NODE precedes the name of an individual LU housed in the node.

Physical Unit (PU)

The PU is the physical representation of a node from the standpoint of the SNA host and the rest of the network. The PU contains the resources DNCS uses to transport data through the network. It also encompasses such data link requirements as circuit protocol and transmission speed.

Logical Unit (LU)

The LU is the point of user access to the SNA network. To access an application on the SNA host, the user must obtain an LU. In DNCS, each LU belongs either to a particular station for its exclusive use or to a pool for shared use by all stations.

Virtual Physical Unit (VPU)

The VPU is a DNCS construct designed to control the number of LUs a station can use concurrently—one for each VPU in the configuration. Each VPU has a collection of LUs. Each PU has one to four VPUs, with its LUs distributed among its VPUs. The number of VPUs in a configuration defines the maximum number of applications any station can access concurrently, since each application session requires an LU from a different VPU.

The LUs that belong to a VPU can either be dedicated to specific stations or left in a pool for use by all stations. A dedicated LU guarantees that the station can access the SNA network. Otherwise, stations without dedicated LUs must draw them from pools. When a pool for a VPU is empty, no more sessions can be established through that VPU until a station completes its session and returns its LU to the pool.

Application

An application is a program running on the SNA host, accessed through DNCS. The SNA host gives each application a name that is unique within the SNA network. A user can log on to any host application by entering the name of the VPU that provides the LU for the session, a period, and then the name of the application, as follows:

<VPU>.<application>

As a user convenience, the DNCS configuration can include synonyms for the most commonly used applications. Entering the DNCS synonym for an application is the same as entering the VPU and host application name. Some commands and messages refer to application synonyms as applications, but their explanations eliminate any ambiguity.

Port

The port is the communications interface for DNCS. All information handled by DNCS passes through a port. Ports are defined as communications devices during the generation of DNOS.

Board

Under DNCS, a board is a collection of one or more ports sharing a common line control discipline (LCD). DNCS recognizes four types of boards and three LCDs. The four board types are as follows:

- CP501 (BCAIM) board — Provides one port for synchronous communications via a modem or for asynchronous communications on a half-duplex or full-duplex line.
- CP502 (X.21 BCAIM) board — Provides one port for synchronous communications via a modem or for asynchronous communications on a half-duplex or full-duplex line.
- CP503 (FCCC) board — Provides ports for up to four communication circuits.
- CI421 (Alpha) board — Provides one synchronous port for the business system series computer.
- Virtual board — Software construct of DNCS used with DNCS interprocess communication line control discipline (DNCS-IPC LCD) to allow stations to communicate with DNCS. The virtual board provides ports for the DNCS/SNA Emulators, DNCS X.25 RFT, X.25 NIO, SVQ, and for the operator interface.

The three LCDs are as follows:

- Synchronous Data Link Control (SDLC) — Allows access to the SNA network and can run on either a CP503 (FCCC), CP501 (BCAIM), CP502 (X.21 BCAIM), or CI421 (Alpha) board.
- Link Access Protocol (LAP) — Allows access to a PSN and can run on either a CP503 (FCCC), CP501 (BCAIM), CP502 (X.21 BCAIM), or CI421 (Alpha) board.
- DNCS Interprocess Communication (DNCS-IPC or CIPC) — Allows access for the SNA Emulators, X.25 RFT, X.25 NIO, SVQ, and operator interface and runs on a virtual board.

Circuit

A circuit connects stations to ports, allowing data to flow between users and their applications. Individual stations on a circuit are identified by their station IDs (sometimes called *polling addresses*). Circuits can be either physical, logical, or virtual.

- Physical circuit — Communication line that connects the DNCS nucleus to the SNA host, to a collection of 914A terminals and printers, or to a PSN.
- DNCS logical circuit — DNCS-IPC channel that connects the DNCS nucleus to DNCS/SNA Emulators, the DNCS operator interface, SVQ, RFT, and NIO.
- X.25 virtual circuit — Individual logic channels that are defined for each physical line connected to the network.

Resource

A resource is any facility of the computing system or operating system required by a job or task. DNCS resources include boards, ports, circuits, applications, and stations.

Station

The station is a device or program used to access applications. Stations use LUs to exchange messages with the SNA host, one LU per application session. DNCS supports a variety of station types in the following general categories:

- Display station — Accepts input from its keyboard and displays its output on a video display screen.
- Printer station — Receives output from the host and records it on an output device or disk file.
- SVQ — Schedules work that includes DNCS host application requests and some SCI commands.
- Keyboard send/receive (KSR) I/O station — Accepts input from its keyboard or disk file, receives output from the host, and records the input or output on a printer or disk file.

Mode

A mode associates an application, LU, and VPU with a station. The mode definition provides the station with automatic or guaranteed access (or both) to host applications. Including a DNCS application synonym in the mode definition allows automatic access to the application when the user presses a mode key or when the station is activated.

Data Terminal Equipment (DTE)

In X.25 network terminology, the DTE is the subscriber's computer equipment connected to the network. The network then becomes the data circuit-terminating equipment (DCE). In DNCS terminology, the DTE is an X.25 resource assigned for each physical line to the network.

Virtual Circuit (VC)

VCS are individual logical channels that the subscriber DTE defines for each physical line to the network. VCs provide the capability of having multiple logical data paths over a single physical line to the network. VCs are of two types: permanent (PVC) and switched (SVC).

Route

A route is an entity containing network subscription information that defines a path to a particular site through a network.

Site

A site is a symbolic name for another computer on the X.25 network. Site names are used to support the RFT or an NIO package such as DNIO. Before you can use a site name to access a remote computer, at least one route must be defined under it.

1.4 NOTATION

The response types and symbols used in this manual for SCI commands and responses (Table 1-1) are compatible with standard DNOS usage. (See the *DNOS System Command Interpreter (SCI) Reference Manual*.) The volume name <CMD> refers to the command library that you entered when you installed DNCS during object installation.

Table 1-1. Key to Response Types and Symbols

Response Type/ Symbol	Meaning
Pathname	DNOS I/O resource pathname.
Sitename	String of up to eight alphanumeric characters beginning with an alphabetic character, representing the symbolic name of a site.
Password	String of up to eight alphanumeric characters beginning with an alphabetic character.
DNCS password	Either a string of up to eight alphanumeric characters beginning with an alphabetic character or a string of up to eight alphanumeric characters enclosed in single or double quotes. If a password is assigned to your DNCS system, you must enter it in response to the DNCS PASSWORD prompts. Otherwise, a response is optional.
YES/NO	The response to a prompt can be YES, NO, Y, or N.
Integer(s)	Hexadecimal or decimal whole number. Precede hexadecimal numbers by a leading zero or a right angle bracket (>).
Character(s)	Set of any characters.
Uppercase	Enter the response as listed.
Lowercase	Enter a response of this type.
[]	The response is optional. If you make a null entry, the system supplies a default value.
{ }	The response is one of the enclosed items or is a type of one of the enclosed items. Items are separated by a slash (/).
@	Synonyms are allowed as responses.
()	Represents the initial value supplied by the system. You can accept the initial value by pressing the Return key, change the value by editing it, or make a null entry by pressing the Skip key.
-	When a hyphen (-) appears between two numbers, it indicates a range. For example, 1-255 represents 1 through 255.
>	When a right angle bracket (>) precedes a number, it indicates a hexadecimal value.

DNCS SCI Commands

2.1 GENERAL INFORMATION

The SCI commands described in this section allow you to start and stop the resources available to DNCS and access the DNCS Command Interpreter (DNCS CI) through the nucleus interface. The first two commands described do not access DNCS CI; they execute (XDNCS) and terminate (TDNCS) the DNCS job as a whole. When the DNCS job is active, any of the rest of the commands may be entered from any DNOS interactive device when the SCI prompt ([]) is displayed.

Note that resource state changes and assignments made through DNCS CI, no matter what access method is used, remain in effect only as long as DNCS is running. When DNCS is restarted, it returns to the configuration specified in the system generation. There is one exception to this rule: if your configuration uses a disk-resident sites table, DNCS saves any modifications that you make to your site and route definitions. DNCS CI cannot be used to add new resources to the configuration. New resources can only be added through the DNCS generation utility, XDGU. When using DNCS CI to modify your configuration (changing port and circuit assignments, for example) DNCS CI only modifies the logical configuration, as it is known to the system. You are responsible for making sure that the logical and physical configurations match.

The command description format for each SCI command in this section begins with the command keyword, followed by the full command name. Next, a brief paragraph describes what the command does. The remainder of the command description is divided into categories (Table 2-1) to aid you in locating particular command information. If a particular command does not require a category, that category is excluded.

Table 2-1. SCI Command Description Format

Category	Description
Prompts	Includes the set of prompts for the command, the types of responses accepted, and any initial values that the command supplies.
Prompt Details	Lists each prompt and describes the type of response required, how the response can be specified, and any default values that apply.
Usage	Includes instructions for normal use of the command and general information about the command.
Example	Presents an example of how to use the command, showing sample responses and describing the outcome of the command.
Message	Documents special completion messages, output formats, nonerror messages, and, in some cases, error messages.
Notes	Explains unusual or unexpected characteristics of a command. Presents information that will help you to use the command properly.

DNCS provides a series of SCI command menus, describing the commands available in your configuration.

2.2 DNCS SCI COMMAND MENUS

Figure 2-1 shows the main DNCS SCI command menu for a completely configured system. Your command menu may differ because the DNCS SCI command menu is built from your DNCS system generation configuration file. The main command menu points to the other DNCS SCI command menus that are installed in your configuration.

To show the main command menu, enter `/DNCS` in response to the SCI prompt (`[]`). You can view the other menus by entering one of the character strings shown in the left column, `/SVQ` for example. The line beginning `/SNA`, and its corresponding menu, appear only if the SNA Emulator package is installed. The line beginning `/RFT`, and its corresponding menu, appear only if the RFT package is installed. The line beginning `/SITES`, and its corresponding menu, appear only if you install the RFT or NIO package. This section describes the nucleus, network, and site commands. Section 5 describes the service queue (SVQ) commands. The SNA and RFT commands are described in their respective user's guides. The DNCS SCI command menus are as follows:

- DNCS nucleus command menu (`/NUC`) — Figure 2-2
- DNCS network command menu (`/DNET`) — Figure 2-3

- DNCS sites command menu (/SITES) — Figure 2-4 (available only with the RFT or NIO package)
- DNCS SVQ command menu (/SVQ) — Figure 2-5
- DNCS SNA Emulator command menu (/SNA) — Figure 2-6 (available only with the SNA Emulator package)
- DNCS RFT command menu (/RFT) — Figure 2-7 (available only with the RFT package)

```

***** /DNCS
*   T E X A S   I N S T R U M E N T S   *
*   D N C S   1.2.0                       *
*****

Command Groups:

/NUC   -- Nucleus Commands
/DNET  -- DNCS Network Commands
/SVQ   -- Service Queue Commands
/SNA   -- SNA Emulator Commands
/RFT   -- X.25 RFT Commands
/SITES -- DNCS Site Management Commands

```

Figure 2-1. DNCS SCI Command Menu

```

***** /NUC
*   D N C S   N U C L E U S   C O M M A N D S   *
*****

DNCSLOG -- Show DNCS Log File
DNCSPSW -- Assign/Cancel DNCS Password
TDNCS   -- Terminate DNCS
XCI     -- Execute DNCS Command Interpreter
XDNC    -- Execute DNCS

```

Figure 2-2. DNCS Nucleus Command Menu

```

*****
*   DNCS NETWORK COMMANDS   *
*****
/NET

ACIR    -- Assign Circuit to Port
APGM    -- Assign Program Trace
APORT   -- Assign Backup to Port
ARES    -- Assign Resource
IST     -- Initialize X25 Statistics
MRES    -- Modify Resource Status
SBOARD  -- Show Board Status
SCIR    -- Show Circuit Status
SPGM    -- Show Program Memory
SPORT   -- Show Port Status
SRES    -- Show Resource Status
SX25    -- Show X25 Statistics

```

Figure 2-3. DNCS Network Command Menu

```

*****
*   D N C S SITE MANAGEMENT COMMANDS   *
*****
/SITES

AROUTE  -- Add or Modify a Route
ASITE   -- Add or Modify a Site
CSDT    -- Clear Statistics in Disk Table
DSITE   -- Delete Site or Route
ISF     -- Initialize Site File
LSITE   -- List Site/Route Directory
SSITE   -- Show Sites

```

Figure 2-4. DNCS Sites Command Menu

```

***** /SVQ
*   D N C S  SERVICE QUEUE COMMANDS   *
*****

CFQ      -- Create Service Queue File
HOSTQST  -- Start Specific Host Queue Service
HOSTSTOP -- Stop Specific Host Queue Service
QHST     -- Place Request on Specific Host Queue
QMGR     -- Service Queue Manager Utility
QPF      -- Place Print Request on PF Queue
QXB      -- Place Batch Request on XB Queue
QXBJ     -- Place Batch Request on XBJ Queue
SCIQST   -- Start SCI Queue Service
SCIQSTOP -- Stop SCI Queue Service

```

Figure 2-5. DNCS Service Queue Command Menu

```

***** /SNA
*   DNCS SNA EMULATOR COMMANDS   *
*****

TPTR     -- Terminate SNA Printer Emulator
XDPSC    -- Execute DNCS Programmed Station Control
XPTR1    -- Execute PTR1 SNA Printer Emulator
XPTR3    -- Execute PTR3 SNA Printer Emulator
XVDT2    -- Execute VDT2 SNA Display Emulator
XKSR     -- Execute SNA Keyboard Send/Receive Emulator

```

Figure 2-6. DNCS SNA Emulator Command Menu

```

*****
* , DNCS X25 RFT COMMANDS *
*****
/ RFT

XRFT -- Execute RFT
TRFT -- Terminate RFT
AMSG -- Assign Messages
RFTLOG - Display RFT Log File
RFTMSG - Display Messages Log File
SPW -- Show RFT Passwords
APW -- Assign RFT Password
DPW -- Delete RFT Password
DPN -- Delete Pathname
IPW -- Initialize Passwords File
SMSG -- Send Operator Message

XFTR -- Execute File Transfer
KFTR -- Kill a File Transfer
SFTR -- Show File Transfer Status
HFTR -- Hold File Transfer
RFTR -- Resume File Transfer
SSTF -- Show Status File
RQXB -- XB on Remote Site
RQXBJ -- XBJ on Remote Site
RQHOST -- Request to Remote Host
RQPF -- PF on Remote Site

```

Figure 2-7. DNCS RFT Command Menu

2.3 DNCS NUCLEUS COMMAND PROCEDURES

The DNCS nucleus command procedures described in the following paragraphs are used to control the DNCS job and to gain access to the DNCS CI. Using the CI, you can issue any of the commands described in Section 3. In addition to the command functions available through the DNCS CI, DNCS provides SCI command functions to start and stop DNCS.

2.3.1 XDNCS (Execute DNCS) Command

The XDNCS command activates the DNCS job so that DNCS operations can begin. XDNCS activation is a prerequisite for the use of most of the other commands described in this guide. DNCS remains active until terminated with TDNCS. If DNCS is active, the message DNCS ALREADY ACTIVE appears and no further action occurs.

Prompts

DNCS BATCH JOB LISTING: <pathname> (@DNCS.S\$DNCS.STRLST)

Prompt Details

DNCS BATCH JOB LISTING

Specifies where you want the batch listing file for the batch job that activates DNCS. It is a good idea to keep this file for diagnostic purposes in case you have trouble activating DNCS.

Results

The message EXECUTE DNCS flashes briefly on the screen as the DNCS job begins execution. It takes DNCS about two minutes to load, initialize, and reach idle state. DNCS is ready when the DNCSPDCT task is in state 42. You can use the LJ command (see paragraph 4.2), to obtain a display that will show DNCSPDCT state.

Example

```
[ ]XDNCS
      DNC BATCH JOB LISTING:  SYS2.S$DNCS.STRLST
```

2.3.2 TDNCS (Terminate DNCS) Command

The TDNCS command terminates the DNCS job. The system operator executes this command from a job other than DNCS.

Prompts

```
TERMINATE DNCS
      ARE YOU SURE?:  {YES/NO}                (NO)
```

Prompt Details**ARE YOU SURE?**

Confirms whether you want to terminate the job. If your reply is NO (or N), TDNCS displays the message DNCS NOT TERMINATED.

Usage

You must execute this procedure from a job outside of DNCS. The following steps illustrate how to use the TDNCS command:

1. If you logged on to the system under job name DNCS, enter Q to quit the job, and then log on again under some other job.
2. Enter the SCI command XO1 to activate the DNOS operator interface.
3. The VDT screen will go blank.
4. Press the Command key to get the SCI prompt [].
5. Enter the TDNCS command.

A completion message appears to indicate job termination status.

Example

```
[ ]TDNCS
      TERMINATE DNCS
      ARE YOU SURE?:  YES
```

2.3.3 XCI (Execute DNCS Command Interpreter) Command

The XCI command allows access to DNCS CI at a terminal. It enables the user to issue the DNCS CI commands described in Section 3.

Prompts

```
EXECUTE DNCS COMMAND INTERPRETER
      COMMAND?:  commandname
LISTING ACCESS NAME: [pathname@]
```

Prompt Details

COMMAND?

Specifies a complete DNCS CI command. (Section 3 describes the DNCS CI commands.)

LISTING ACCESS NAME

Specifies the access name of the destination for DNCS CI displays. The terminal local file (TLF) of the station issuing the command is the default.

Usage

XCI provides the primary operator interface to DNCS CI commands. Using XCI, you can issue any command described in Section 3. XCI can be used in SCI batch format, as described in the *DNOS SCI Reference Manual*. However, when used in batch format if any non-alphanumeric characters are used in the command string (=, for example), the entire string must be enclosed in quotation marks or apostrophes. For example, the following is a legal command: []XCI C = "HARDCOPY VDU = VDT01 PTR01".

Example

```
[ ]XCI
EXECUTE DNCS COMMAND INTERPRETER
      COMMAND?:  ASSIGN P011 TO P012
LISTING ACCESS NAME:
```

2.4 DNCS NETWORK SCI COMMANDS

DNCS network SCI commands allow you to perform most DNCS network system resource management functions without using DNCS CI directly, through the XCI command or the SNA Emulators. However, you may want to use DNCS CI directly when you perform both DNCS network and DNCS SNA system resource management, such as displaying PUs or LUs. The *DNOS DNCS X.25 Remote File Transfer (RFT) User's Guide* describes in detail DNCS commands related to operating the remote file transfer system.

In order to use the network SCI commands, the nucleus interface must be present (CIRES resource defined with CI circuit in the DNCS system configuration). When the nucleus interface is present and DNCS is active, you can issue these commands from any DNOS terminal with access to SCI.

2.4.1 Notes on Command Format

In the commands that follow, the prompt DNCS PASSWORD is optional. However, if the system has a password assigned and a password is not supplied in the command, the command is not executed and the message DNCS0080 I SECURITY VIOLATION is displayed. Note that the DNCS password is different from the RFT file passwords.

Several options are available on the Show commands (SBOARD, for example) relating to resource names, status, short/long display form, and output access name. On the resource name prompts (for example, BOARD NAME for the SBOARD command, or CIRCUIT NAME for the SCIR command), a null entry displays all resources of that type (for example, all boards or all circuits). This is called a generic display. Entering a specific resource name (B01 in response to BOARD NAME, for example), generates a specific display.

With a generic display, the STATUS prompt has meaning because it specifies displaying all resources of that type that are in one of the active states (A) or inactive states (I), or all resources regardless of state (B). With a specific display, the STATUS prompt has no meaning because it displays the specified resource regardless of the response to the STATUS prompt. The STATUS prompt is equivalent to the ACT/INACT options of the DNCS CI Display command (see Section 3).

Conversely, with generic displays the SHORT FORM prompt has no meaning, because all resources of the specified type in the specified state are displayed regardless of whether the response to SHORT FORM is Y or N. With specific displays (resource name specified), responding to SHORT FORM with a Y displays only the specified resource. Responding to SHORT FORM with an N displays the status of the specified resource and the resources defined under it (ports defined to a board or stations defined to a circuit, for example). The SHORT FORM prompt is equivalent to the NONE option of the DNCS CI Display command.

Several responses are valid for the OUTPUT ACCESS NAME prompt. These responses are the same as for any other SCI command. Valid responses are as follows:

- Sequential file pathname — The file is created if it does not exist and is replaced if it does exist. If the directory to which the file belongs does not exist, an error is returned.
- Nonspooling printer — You can send the display directly to any DNOS printer that is not used by the Spooler or one of the SNA Emulators. If the printer is in use by one of these other programs, the message OPR054: INVALID FILE/DEVICE PATHNAME: appears.
- Your terminal — If the response to OUTPUT ACCESS NAME is null (blank), the display is written to the TLF of the terminal issuing the command. The display remains on the screen until you press the Command key. For further examination, you can scroll the display up (F1 key) or down (F2 key). This is the most common response to the OUTPUT ACCESS NAME prompt.

- Another display terminal — If the response to OUTPUT ACCESS NAME is the name of a valid DNOS display terminal (STxx), the display is written to the terminal as if it were a printer or file. The display replaces whatever is on the screen at that time, scrolls rapidly up the screen, disappears, and returns the original display to the screen. This method does not allow you to examine the display for any length of time, and the user of the other terminal usually does not appreciate the display.
- Scroll-up on your terminal — If the response to OUTPUT ACCESS NAME is ME or the name of your terminal (STxx, where xx is your terminal ID), the result is the same as for another display terminal described previously. The display scrolls rapidly up the screen and disappears, allowing you only a very brief time to examine it.

2.4.2 ACIR (Assign Circuit to Port) Command

The ACIR command logically connects or disconnects a circuit to a port. Before you can use the circuit, you must physically move the cable that connects your modem to the controller port that you have assigned to the circuit. The circuit and port must be in the STOP state, and the port must not have another circuit assigned. ACIR is identical to the DNCS CI Assign Circuit command.

Prompts

```

ASSIGN CIRCUIT TO PORT
      CIRCUIT NAME:  circuitname
      PORT NAME:    [portname]
DNCS PASSWORD:    [password]
    
```

Prompt Details

CIRCUIT NAME

Specifies the name of the circuit to be connected or disconnected.

PORT NAME

Specifies the name of the port to which the circuit is to be connected or a null entry indicating that the circuit is to be disconnected from the port to which it is currently attached.

DNCS PASSWORD

Specifies the valid DNCS password. The password is required, if assigned.

Example

```

[ ] ACIR
ASSIGN CIRCUIT TO PORT
      CIRCUIT NAME:  C01
      PORT NAME:    P021
DNCS PASSWORD:    ABC123
    
```

2.4.3 APM (Assign Program Trace) Command

The APM command assigns trace levels and specifies which tasks (DNCS and/or RFT) are to be traced. Trace data is logged onto the RFT log file for RFT traces and onto the DNCS log file for DNCS traces. The trace facility is a diagnostic tool for systems analysts.

Prompts

```

ASSIGN PROGRAM TRACE
      TASK NAME: taskname                (RFT)
      TRACE(ON/OFF): {ON/OFF}           (ON)
      TRACE LEVEL: integer               (OFFF)
      DNCS PASSWORD: [password]
  
```

Prompt Details

TASK NAME

Specifies the name of a DNCS task or the RFT task. Valid entries are as follows:

RFT	Remote file transfer task
DNCS PDCT	Physical device control task
DNCS SCT	System control task
DNCS CI	DNCS Command Interpreter task
DNCS NAP	Network access protocol task
DNCS TRP	Transport protocol task
DNCS PC	SNA path control task
DNCS DC	SNA device control task
DNCS TSR	Terminal services routine
DNCS NIA	Network interface adapter task
DNCS INAP	Interface to NAP task

You can select any combination by using multiple APM commands. Not all DNCS tasks reside on all DNCS configurations. If you attempt to assign a trace to a task that is not included in your configuration, an error occurs.

TRACE (ON/OFF) Command

Specifies that the trace for the task is to be turned on or off. The default value is ON.

TRACE LEVEL

Specifies the trace level required, a hexadecimal number. The default value is 0FFFF, which turns on all of the traces for the specified task.

DNCS PASSWORD

Specifies a valid DNCS password. The password is required if assigned.

Example

```
[ ]APGM
ASSIGN PROGRAM TRACE
      TASK NAME:  RFT
      TRACE (ON/OFF):  ON
      TRACE LEVEL:  02000
      DNCS PASSWORD:  ABC123
```

2.4.4 APORT (Assign Backup to Port) Command

The APORT command assigns a backup port to a port or cancels the current backup assignment. Both ports must be in the STOP state. APORT is identical to the DNCS CI Assign Port command.

Prompts

```
ASSIGN BACKUP TO PORT
      PRIMARY PORT NAME:  portname
      BACKUP PORT NAME:  [portname]
      DNCS PASSWORD:    [password]
```

Prompt Details

PRIMARY PORT NAME

Specifies the name of the primary port.

BACKUP PORT NAME

Specifies the name of the backup port. A null entry cancels the previous backup port assignment.

DNCS PASSWORD

Specifies a valid DNCS password. The password is required, if assigned.

Example

```
[ ]APORT
ASSIGN BACKUP TO PORT
      PRIMARY PORT NAME:  P011
      BACKUP PORT NAME:  P012
      DNCS PASSWORD:    ABC123
```

2.4.5 ARES (Assign Resource) Command

The ARES command assigns resources of DNCS to other resources (for example, circuits to ports, and routes to subscriber addresses). The ARES command is identical to the DNCS CI Assign command series.

Prompts

```
ASSIGN RESOURCE-CIR,ROUTE,SITE,PGM,PORT,PW
RESOURCE TYPE: {CIR/ROUTE/SITE/PGM/PORT/PW} (CIR)
```

Prompt Details

RESOURCE TYPE

Specifies the type of resource to be assigned. Secondary prompts are issued depending on your response. The following equivalences apply:

ARES CIR = ACIR

ARES ROUTE = AROUTE (Assign X.25 Route)

ARES SITE = ASITE (Assign X.25 Site)

ARES PGM = APGM

ARES PORT = APORT

ARES PW = APW (Assign RFT Password)

Note that ARES PW assigns an RFT password, which is different from the DNCS password. This command produces an error message if RFT is not part of your configuration. AROUTE and ASITE also produce errors if your system contains neither RFT nor NIO.

Example

```
[ ]ARES
ASSIGN RESOURCE - CIR,ROUTE,SITE,PGM,PORT,PW
RESOURCE TYPE: PORT
```

If you specify PORT as the resource type, the APORT prompts appear on the screen after you press the Return key.

2.4.6 DNCSLOG (Show DNCS Log File) Command

The DNCSLOG command displays the DNCS log file.

Prompts

```
SHOW DNCS LOG FILE
```

Prompt Details

There are no prompts.

Example

```
[ ]DNCSLOG  
SHOW DNCS LOG FILE
```

2.4.7 DNCSPSW (Assign/Cancel DNCS Password) Command

The DNCSPSW command assigns or cancels a DNCS password. DNCSPSW is identical to the DNCS CI Assign Password and Cancel Password commands.

Prompts

```
ASSIGN/CANCEL DNCS PASSWORD  
NEW PASSWORD: [password]  
OLD PASSWORD: [password]
```

Prompt Details

NEW PASSWORD

Specifies the new DNCS password to be assigned. A null entry cancels the current password assignment.

OLD PASSWORD

Specifies the old DNCS password, which is deleted (if it exists).

Example

```
[ ]DNCSPSW  
ASSIGN/CANCEL DNCS PASSWORD  
NEW PASSWORD: XYZ987  
OLD PASSWORD: ABC123
```

Note

If a password does not begin with an alphabetic character or contains non-alphanumeric characters, it must be enclosed in double quotes (for example, "123").

2.4.8 IST (Initialize X.25 Statistics) Command

The IST command initializes counters used for accumulating and reporting statistics on the X.25 network (X25) and its associated sites and routes. The IST command is identical to the DNCS CI command Start X25 Statistics. If you are not using an X.25 network in your configuration, this command is not appropriate.

Prompts

```
INITIALIZE STATISTICS-X25,SITES
                                LEVEL: {X25/SITES}           (SITES)
                                DNCS PASSWORD: [password]
```

Prompt Details

LEVEL

Specifies the level to be initialized or reset. Enter either X25 or SITES. If select X25, DNCS clears all of the X.25 and site statistics. If you select SITES, the following additional prompt appears:

```
SITE OR ROUTE NAME: [sitename,routename]
```

Enter the name of a site or route defined in your sites table. A valid response is required. Specifying a site name resets the statistics for the site and its associated routes. Specifying a route name only resets the statistics for the route. If your sites table is disk-resident, IST resets the disk-resident statistics as well as the memory-resident statistics.

DNCS PASSWORD

Specifies a valid DNCS password. The password is required, if assigned.

Example

```
[ ]IST
INITIALIZE STATISTICS-X25,SITES
                                LEVEL: X25
                                DNCS PASSWORD: ABC123
```

2.4.9 MRES (Modify Resource Status) Command

The MRES command modifies the state of DNCS resources (for example, stops circuits or backs up ports). The MRES command is identical to the DNCS CI Activation commands.

Prompts

```
MODIFY RESOURCE STATUS
RESOURCE NAME: resourcename
NEW STATUS: {START/RESTART/STOP/BACKUP/RESTORE} (START)
DNCS PASSWORD: [password]
```

Prompt Details

RESOURCE NAME

Specifies the name of the resource to be modified.

NEW STATUS

Specifies the new resource status required. Status can be START, RESTART, STOP, BACKUP, or RESTORE.

DNCS PASSWORD

Specifies a valid DNCS password. The password is required if assigned.

Example

```
[ ] MRES
MODIFY RESOURCE STATUS
    RESOURCE NAME: P021
    NEW STATUS: STOP
    DNCS PASSWORD: ABC123
```

2.4.10 SBOARD (Show Board Status) Command

The SBOARD command displays board status. The RBOARD command is identical to the DNCS CI Display Board command.

Prompts

```
SHOW BOARD STATUS
    BOARD NAME: [boardname]
    STATUS(A/I/B): {ACT/INACT/BOTH} (BOTH)
    SHORT FORM(Y/N): YES/NO (YES)
    OUTPUT ACCESS NAME: [pathname@]
```

Prompt Details

BOARD NAME

Specifies the board whose status you want to display. A null entry displays all boards and is the same as the Display Boards CI command.

STATUS (A/I/B)

Specifies the display that you want. Enter an A if you want status for all active boards, an I if you want status for all inactive boards, or a BOTH if you want status for both active and inactive boards. Status has a meaning only if your response to BOARD NAME is null.

SHORT FORM (Y/N)

Specifies a short or long form. Enter NO if you want the long form. Enter YES (Y) if you want the short form. A short form has meaning only if you enter a board name in response to the BOARD NAME prompt.

OUTPUT ACCESS NAME

Specifies the pathname of the file or device where you want to send the display. A null entry returns the display to the terminal issuing the command.

Usage

See the Display Board command for an illustration of the display.

Example

```
[ ] SBOARD
SHOW BOARD STATUS
      BOARD NAME:  B01
      STATUS(A/I/B):  BOTH
      SHORT FORM(Y/N):  NO
      OUTPUT ACCESS NAME:
```

2.4.11 SCIR (Show Circuit Status) Command

The SCIR command displays circuit status. SCIR is identical to the DNCS CI Display Circuit command.

Prompts

```
SHOW CIRCUIT STATUS
      CIRCUIT NAME:  [circuitname]
      STATUS(A/I/B):  {ACT/INACT/BOTH}          (BOTH)
      SHORT FORM(Y/N):  YES/NO                (YES)
      OUTPUT ACCESS NAME:  [pathname @ ]
```

Prompt Details**CIRCUIT NAME**

Specifies either the name of the circuit to be displayed or a null entry (meaning: display all circuits of the status identified).

STATUS(A/I/B)

Specifies active (ACT) or inactive (INACT) circuits to be displayed, or both (BOTH).

SHORT FORM(Y/N)

Specifies a short form display.

OUTPUT ACCESS NAME

Specifies the pathname of the file or device onto which the information will be listed. A null entry returns the display to the terminal issuing the command.

Usage

See the Display Circuit command for an illustration of the display.

Example

```
[ ] SCIR
SHOW CIRCUIT STATUS
      CIRCUIT NAME: C02
      STATUS(A/I/B): BOTH
      SHORT FORM(Y/N): N
      OUTPUT ACCESS NAME:
```

2.4.12 SPGM (Show Program Memory) Command

The SPGM command displays 256 bytes of a DNCS task or CP503 (FCCC) memory. SPGM is identical to the DNCS CI Display FCCC/Task Memory command.

Prompts

```
SHOW PROGRAM MEMORY
      DNCS TASK OR FCCC NAME: {taskname/fcccname}
      STARTING ADDRESS: [integer]
      OUTPUT ACCESS NAME: [pathname @]
```

*Prompt Details***DNCS TASK OR FCCC NAME**

Specifies the name of the DNCS task (other than CLOK) or CP503 (FCCC) board.

STARTING ADDRESS

Specifies the starting address for the dump.

OUTPUT ACCESS NAME

Specifies the pathname of the file or device onto which the dump will be listed. A null entry returns the display to the terminal issuing the command.

Usage

See the Display FCCC/Task command for an illustration of the display.

Example

```
[ ] SPGM
SHOW PROGRAM MEMORY
      DNCS TASK OR FCCC NAME: DNCSNAP
      STARTING ADDRESS: 040
      OUTPUT ACCESS NAME:
```

2.4.13 SPORT (Show Port Status) Command

The SPORT command displays the status of one or more ports. SPORT is identical to the DNCS CI Display Port command.

Prompts

```

SHOW PORT STATUS
      PORT NAME: [portname]
      STATUS(A/I/B): {ACT/INACT/BOTH}           (BOTH)
      SHORT FORM(Y/N): YES/NO                   (YES)
      OUTPUT ACCESS NAME: [pathname @]

```

Prompt Details

PORT NAME

Specifies either the name of the port to be displayed or a null entry (meaning display all ports of the status specified).

STATUS(A/I/B)

Specifies whether active (ACT) or inactive (INACT) ports are to be displayed, or both (BOTH).

SHORT FORM(Y/N)

Specifies a short form display.

OUTPUT ACCESS NAME

Specifies the pathname of the file or device onto which the information will be listed. A null entry returns the display to the terminal issuing the command.

Usage

See the Display Port command for an illustration of the display.

Example

```

[ ]SPORT
SHOW PORT STATUS
      PORT NAME:
      STATUS(A/I/B): BOTH
      SHORT FORM(Y/N): YES
      OUTPUT ACCESS NAME:

```

2.4.14 SRES (Show Resource) Command

The SRES command shows DNCS resource status. The SRES command is identical to the DNCS CI Display command series. The SRES command can be abbreviated as shown in the discussion of the RESOURCE TYPE prompt.

Prompts

```
SHOW RESOURCE-BOARD,CIR,PORT,SITE,X25,PGM,PW
RESOURCE TYPE: {BOARD/CIR/PORT/SITE/X25/PGM/PW} (CIR)
```

Prompt Details

RESOURCE TYPE

Specifies the type of resource to be displayed. Secondary prompts are issued depending on the RESOURCE TYPE response. The following equivalences apply:

SRES BOARD	=	SBOARD
SRES CIR	=	SCIR
SRES PORT	=	SPORT
SRES SITE	=	SSITE (Show X.25 Sites)
SRES X25	=	SX25 (Show X.25 Statistics)
SRES PGM	=	SPGM
SRES PW	=	SPW (Show RFT Passwords)

Usage

See the appropriate Display command for an illustration of the display. Note that the SRES PW command shows the RFT password file and not the DNCS password. If RFT is not part of your configuration, the SRES PW command produces an error message. If X.25 is not part of your configuration, the SSITE and SX25 commands produce an error message.

Example

```
[ ]SRES
SHOW RESOURCE-BOARD,CIR,FCCC,PORT,SITE,X25,PGM,PW
RESOURCE TYPE: PORT
```

If you enter PORT in response to the RESOURCE TYPE prompt, the prompts for the SPORT command appear.

2.4.15 SX25 (Show X.25 Statistics) Command

The SX25 command displays X.25 statistics. SX25 is identical to the DNCS Display X.25 Statistics command.

Prompts

```
SHOW X25 STATISTICS
  SUBSCRIBER ADDRESS: integer
    VIRTUAL CIRCUIT: [integer]
  OUTPUT ACCESS NAME: [pathname @]
```

*Prompt Details***SUBSCRIBER ADDRESS**

Specifies the local subscriber address for which statistics are required. You can use the SSITE command to show subscriber address for a particular site.

VIRTUAL CIRCUIT

Specifies a specific virtual circuit attached to the local subscriber or a null entry (meaning global statistics for that subscriber).

OUTPUT ACCESS NAME

Specifies the pathname of the file or device onto which the information will be listed. A null response returns the display to the terminal issuing the command.

Usage

If X.25 is not part of your configuration, the SX25 command produces an error message.

In the case of Show Global X.25 Statistics for a subscriber, the following data is supplied:

Static (subscription) parameters

Number of permanent VCs	Number of switched VCs, send-only
Number of switched VCs, receive-only	Reception packet size
Number of switched VCs, send-receive	Reception window
	Transmission window
	Transmission packet size

Dynamic parameters

Number of received packets	Total number of accepted incoming calls
Number of transmitted packets	Total number of confirmed call requests
Number of received data packets	Total open time for switched VCs
Number of transmitted data packets	Number of opened VCs
Total amount of received data	
Total amount of transmitted data	

The static parameters reflect the configuration defined during DNCS system generation. The dynamic parameters reflect the communications activity that has occurred since activating DNCS.

In the case of Display X.25 Statistics for a specified VC, the following information is displayed:

Static parameter

VC type (switched/permanent)

Dynamic parameters

VC status (opened or not)	Number of network-generated reset indications
Remote subscriber address	Number of remote DTE-generated reset indications
Number of received packets	Number of clear requests
Number of transmitted packets	Number of network-generated clear indications
Number of received data packets	Number of remote DTE-generated clear indications
Number of transmitted data packets	
Number of accepted incoming calls	
Number of confirmed call requests	
Total time opened	
Number of reset requests	

Example

```
[ ]SX25
SHOW X25 STATISTICS
  SUBSCRIBER ADDRESS: 106000229
  VIRTUAL CIRCUIT:
  OUTPUT ACCESS NAME:
```

Figure 2-8 illustrates an example listing that SX25 produces.

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

STATISTICS FOR SUBSCRIBER :      106000229
NUMBER OF PVC :                  1
NUMBER OF SVC RO :               0
NUMBER OF SVC BW :               0
NUMBER OF SVC SO :               0
RECEPTION PACKET SIZE :         128
RECEPTION WINDOW :              002
TRANSMISSION WINDOW :           002
TRANSMISSION PACKET SIZE :      128
NUMBER OF PACKETS TRANSMITTED :  0
NUMBER OF PACKETS RECEIVED :    0
NUMBER OF DATA PACKETS TRANSMITTED : 0
NUMBER OF DATA PACKETS RECEIVED : 0
NUMBER OF DATA BYTES RECEIVED : 0
NUMBER OF DATA BYTES TRANSMITTED : 0
NUMBER OF INCOMING CALLS :      0
NUMBER OF CALL REQUESTS :       0
TOTAL TIME OPENED :             0
NUMBER OF OPENED SVCS :         0

DNCS0050 I DISPLAY COMPLETE

```

Figure 2-8. Example SX25 Output

2.5 DNCS SITES DIRECTORY SCI COMMANDS

DNCS maintains a dynamic table of sites and routes that X.25 uses to access remote configurations. During DNCS system generation, you define the sites and routes and specify whether you want a disk-resident sites table or only a memory-resident table. If you use a disk-resident table, DNCS writes onto disk any changes you make to the site and route definitions so that the changes become a permanent part of your configuration. If you do not use a disk-resident sites table, any changes you make remain only as long as DNCS is active; when you terminate DNCS and then reactivate it, the sites table contains only the sites and routes that you defined during DNCS system generation. The following commands allow you to manage the site and route entries in the sites directory:

- AROUTE — Add or modify route
- ASITE — Add or modify site
- CSDT — Clear statistics on disk table
- DSITE — Delete site or route
- ISF — Initialize site and route file

- **LSITE** — Show sites and routes on a disk-resident table
- **SSITE** — Show sites and routes contained in memory

The permanent sites directory is established during system generation and contains an entry for each remote site name used at the installation. RFT, NIA, and NIO access the site and route table. The disk-resident site and route table is a key index file (KIF) created by the ISF command. After starting DNCS, the system operator uses ASITE, DSITE, and SSITE to change subscription parameters, modify previous sites entries, add new sites entries, and so forth. These commands allow you to quickly change site and route definitions that use switched virtual circuits. You cannot use AROUTE or ASITE to add, modify, or delete sites and routes that use a permanent virtual circuit.

Use the LSITE command to view the contents of the disk-resident sites table and the SSITE command to view the memory-resident sites table.

These commands operate on a copy of the sites directory held in memory. If your configuration uses a disk-resident sites table, these commands also update the disk-resident table. Thus, if your configuration uses a disk-resident sites table, DNCS updates the sites directory both in memory and on disk. If your configuration does not use a disk-resident sites table, the changes you make are in effect only during the DNCS session in which they are made and will be lost following a system shutdown. To make permanent updates to a memory-only sites table, the system operator must do one of the following:

- After starting DNCS, use the SCI batch facility for ASITE, AROUTE, and DSITE in order to apply permanent sites directory updates. (See the examples for AROUTE, ASITE and DSITE.)
- Modify the permanent sites directory by performing a DNCS system generation again to include any permanent updates. If your configuration is likely to change in the future, consider using a disk-resident table.

The *DNOS SCI Reference Manual* describes the SCI batch facility.

2.5.1 AROUTE (Add or Modify a Route) Command

The AROUTE command adds or modifies entries for remote route names in the sites directory.

Prompts

```
[ ]AROUTE
ADD OR MODIFY A ROUTE
      ROUTE NAME:  routename
ASSOCIATED SITE NAME:  sitename
SUBSCRIBER ADDRESS:  integer
      RCALLED(Y/N):  {YES/NO}                (NO)
CLOSED USER GROUP:  [integer]
      USER FACILITIES:  [integer]
      NETWORK NAME:  networkname
      DNCS PASSWORD:  [password]
```

Prompt Details**ROUTE NAME**

Specifies the symbolic route name for the entry to be added or modified.

To enable all users to easily relate an address to a route name, the recommended method is to use simple derivatives of the associated site's name. (For example PARIS11, PARIS21, LYON11, and so on.) Site and route names must be unique. If you name a site PARIS1 and also try to name a route PARIS1, DNCS displays a message to inform you that the name is already in use.

ASSOCIATED SITE NAME

Specifies the symbolic site name to which the route belongs.

SUBSCRIBER ADDRESS

Specifies a decimal integer of up to 15 digits that identifies the subscriber, or data terminal equipment (DTE), address assigned to the site name. Two or more remote route names can have the same subscriber address.

RC CALLED(Y/N)

Indicates whether the local site issuing a call is to request the packet-switching network (PSN) to reverse charge the remote site (YES) or not (NO) for calls made to this remote site.

CLOSED USER GROUP

Indicates the number that the network authority assigns at subscription time. This number identifies the closed user group (CUG) to be used for calls that the local site makes to this remote site name. If a network supports CUGs, enter a decimal number from 0 through 254 or a hexadecimal number with the > sign or a leading zero and up to two digits. (For some networks, zero specifies membership in the group of all network sites, that is, no protection.) If a network does not support CUGs, enter the decimal number 255 or the hexadecimal number > FF.

USER FACILITIES

Indicates whether your configuration uses any network-dependent options. Enter a null value if your configuration does not use any user facilities. Consult your network authority to determine whether you should specify any user facilities. Enter the appropriate integer value (up to six decimal digits), which DNCS uses to define the user facilities contained in the calling packet. An example of user facilities is the priority grade of service option available in the DATAPAC network.

NETWORK NAME

Identifies the name of the network that the local route will use in making calls to the remote route name. Valid network names are as follows:

Name	Country
ARPAC	Argentina
DATANET1	Netherlands
DATAPAC	Canada
DATEXP	Germany
DCS	Belgium
PSS	United Kingdom
TELENET	United States
TELEPAC	Switzerland
TRANSPAC	France
TYMNET	United States
ACS*	
DDX*	
EURONET*	
KDD*	
TICOG*	

Note:

*Network name is reserved.

If the response is not one of the above or a leased-line name defined during DNCS system generation, this procedure terminates with an error message.

DNCS PASSWORD

Specifies the valid DNCS password. The password is required if one is assigned to your DNCS system.

Usage

To update the sites and route table, you can use a batch file for the AROUTE command. If your configuration contains a disk-resident sites table, the AROUTE command updates both the disk-resident and memory-resident versions of the sites table.

Examples

The following examples add (or modify) an entry for NICE21 in the local sites directory. The first example shows the AROUTE command being used interactively, and the second example shows an equivalent form of the command that can be used in an SCI batch file.

```
[ ]AROUTE
  ADD OR MODIFY AROUTE NAME: NICE21
    ASSOCIATED SITE NAME: NICE2
      SUBSCRIBER ADDRESS: 106000022
        RCALLED(Y/N): NO
          CLOSED USER GROUP: 18
            USER FACILITIES:
              NETWORK NAME: TRANSPAC
                DNCS PASSWORD: ABC123
```

```
AROUTE ROUTE = NICE21,
  ASN = NICE2,
  SUB = 106000022,
  RCALLED = NO,
  CUG = 18, NETWORK = TRANSPAC,
  DNCS PASSWORD = ABC123
```

2.5.2 ASITE (Add or Modify Site) Command

The ASITE command adds or modifies entries for remote site names in the sites directory.

Prompts

```
[ ]ASITE
  ADD OR MODIFY SITE
    SITE NAME: sitename
      RCALLING(Y/N): {YES/NO} (NO)
        DNCS PASSWORD: [password]
```

*Prompt Details***SITE NAME**

Specifies the symbolic remote site name for the entry to be added or modified.

To enable all users to easily relate an address to a site name, the recommended method is to use simple derivatives of the remote site's local name. (For example PARIS1, PARIS2, LYON1, and so on.) Site and route names must be unique.

RCALLING(Y/N)

Indicates whether the local site will accept reverse charge calling from this remote site (YES) or not (NO).

DNCS PASSWORD

Specifies the valid DNCS password. The password is required if assigned.

Usage

To update the sites directory, you can use a batch file for the ASITE command. If your configuration contains a disk-resident sites table, the ASITE command updates both the disk-resident and memory-resident versions of the sites table.

Examples

The following examples add (or modify) an entry for NICE2 in the local sites directory. The first example shows the ASITE command being used interactively, and the second example shows an equivalent form of the command that can be used in an SCI batch file.

```
[ ]ASITE
ADD OR MODIFY
                SITE NAME: NICE2
                RCALLING(Y/N): NO
                DNCS PASSWORD: ABC123
```

```
ASITE SITE = NICE2,
RCALLING = NO,
DNCS PASSWORD = ABC123
```

2.5.3 CSDT (Clear Statistics on Disk Table) Command

The CSDT command resets the statistics contained on a disk-resident sites table. If DNCS is active, CSDT can reset site statistics for any disk-resident sites table. If your configuration does not use a disk-resident sites table, performing the CSDT command produces an error.

Prompts

```
[ ]CSDT
CLEAR STATISTICS ON DISK TABLE
                SYSTEM VOLUME NAME: [volumename]
```

*Prompt Details***SYSTEM VOLUME NAME**

Enter the volume name of the DNOS system disk.

Usage

Use the CDST command to reset all of the statistics for a disk-resident sites table. If you do not want to reset all site statistics, use the IST command instead. IST allows you to reset statistics for a specific site or route without resetting the entire sites table.

Example

The following example resets the statistics for a disk-resident sites table:

```
[ ] CSDT
CLEAR STATISTICS ON DISK TABLE
SYSTEM VOLUME NAME: DNOSVOL
```

If no message appears, the operation was successful. You can perform the SSITE command to verify the operation.

2.5.4 DSITE (Delete Site or Route) Command

The DSITE command deletes a remote site or route name entry from the sites directory. If you delete a site, its associated routes are also deleted. The DSITE command updates the memory-resident and disk-resident sites table (if your configuration uses a disk-resident table).

Prompts

```
[ ] DSITE
DELETE SITE OR ROUTE
SITE OR ROUTE NAME: [sitename,routename]
DNCS PASSWORD: [password]
```

*Prompt Details***ROUTE OR SITE NAME**

Identifies the name of the route or site entry to be deleted.

DNCS PASSWORD

Specifies the valid DNCS password. The password is required, if assigned.

Usage

To update the sites directory, you can use a batch file for the DSITE command.

Examples

The following examples delete the entry for the LILLE2 site in the local sites directory. The first example shows the DSITE command being used interactively, and the second example shows an equivalent form of the command that can be used in an SCI batch file.

```
[ ]DSITE
DELETE SITE
      ROUTE OR SITE NAME:  LILLE2
      DNCS PASSWORD:     ABC123
```

```
DSITE ROUTE = LILLE2, DNCS PASSWORD = ABC123
```

2.5.5 ISF (Initialize Site File) Command

The ISF command creates the KIF that contains the disk-resident sites table. Usually, you do not need to perform this command because DNCS does not delete the sites file. The ISF command creates the file, but does not write the site and route definitions contained in your DNCS system configuration onto this file. ISF discards any modifications you have made to the sites table. If someone deletes all of your site and route definitions, you can use the ISF command to restore the sites file. The next time you reactivate DNCS (XDNCS) it determines that the sites file is empty and writes the site and route definitions that you supplied during DNCS system generation onto the disk-resident file.

Prompts

```
[ ]ISF
INITIALIZE SITE FILE
      SYSTEM VOLUME NAME: [volumename]
```

Prompt Details

```
SYSTEM VOLUME NAME
Enter the volume name of the DNOS system disk.
```

Usage

Use the ISF command to restore your disk-resident sites table to its original condition. Remember that ISF discards any changes you make to the site and route entries defined during DNCS system generation, so you may want to save the list for future reference (see SSITE).

Example

The following example initializes the disk-resident sites table:

```
[ ]ISF
INITIALIZE SITE FILE
      SYSTEM VOLUME NAME:  DNOSVOL
```

If no message appears, the operation was successful. You can perform the SSITE command to verify the operation.

2.5.6 LSITE (List Site/Route Directory) Command

The LSITE command shows the current contents of your disk-resident sites table. If your configuration does not use a disk-resident sites table, the LSITE command returns an error when you try to execute it.

Prompts

```
[ ]LSITE
LIST SITE/ROUTE DIRECTORY
  SYSTEM VOLUME NAME: [volumename]
  LISTING OUTPUT DEVICE:
```

Prompt Details

SYSTEM VOLUME NAME

Enter the volume name of the disk containing your DNOS system.

OUTPUT ACCESS NAME

Identifies the pathname of the file or device on which the site(s) display will be listed.

Usage

Use the LSITE command to view the contents of your disk-resident sites table.

Example

The following example lists the contents of your disk-resident sites table:

```
[ ]LSITE
LIST SITE/ROUTE DIRECTORY
  SYSTEM VOLUME NAME: DNOSVOL
  LISTING OUTPUT DEVICE:
```

2.5.7 SSITE (Show Sites) Command

The SSITE command displays the memory-resident sites table or a specific site's static and dynamic parameters. The SSITE command can also display these parameters for individual routes.

Prompts

```
[ ]SSITE
SHOW SITES
  SITE OR ROUTE NAME: [sitename,routename]
  OUTPUT ACCESS NAME: [pathname@]
```

*Prompt Details***SITE OR ROUTE NAME**

Identifies the site or route name for which a parameter display is required or accepts a null entry, indicating that the sites directory is to be displayed.

A parameter display includes the following data:

- Maximum number of transport connections (static)
- Number of transport connections that have been opened
- Total time that transport connections have been opened
- Total number of transport data units transmitted and received

OUTPUT ACCESS NAME

Identifies the pathname of the file or device on which the site(s) display will be listed.

Examples

In the following example, the SSITE command displays the sites directory.

```
[ ] SSITE
SHOW SITES
      SITE OR ROUTE NAME:
      OUTPUT ACCESS NAME:
```

Figure 2-9 shows the resulting output. The asterisk (*) indicates the local site.

SITE/ROUTE	ADDRESS	RC-ED	RC-ING	CUG	USERFAC	NETWORK
*PARIS			N	18		
PARIS1	706000022	N				TRANSPAC
LYON1			Y	18		
LYON11	405550010	N				TRANSPAC
LYON2			Y	18		
LYON21	405550011	N				TRANSPAC
LILLE1			Y	18		
LILLE11	306654308	N				TRANSPAC
LILLE2			Y	18		
LILLE21	306654309	N				TRANSPAC

Figure 2-9. Example SSITE Output of Sites Directory

In the following example, the SSITE command displays the parameters for the PARIS site.

```
[ ]SSITE
SHOW SITES
      SITE OR ROUTE NAME:  PARIS
      OUTPUT ACCESS NAME:
```

Figure 2-10 shows the resulting output.

In the following example, the SSITE command displays the parameters for the PARIS1 route.

```
[ ]SSITE
SHOW SITES
      SITE OR ROUTE NAME:  PARIS1
      OUTPUT ACCESS NAME:
```

Figure 2-11 shows the resulting output.

```
TRANSPORT  STATISTICS
SITE NAME :                               PARIS
TRANSPORT CONNECTIONS :                   11
TRANSPORT CONNECTIONS OPENED :            1
DATA BYTES TRANSMITTED :                   96900
DATA BYTES RECEIVED :                      5307
```

Figure 2-10. Example SSITE Output of Site Parameters

```
TRANSPORT STATISTICS
ROUTE NAME :                               PARIS1
SITE NAME :                               PARIS
TRANSPORT CONNECTIONS :                   11
TRANSPORT CONNECTIONS OPENED :            1
TIME OF CONNECTIONS OPENED :              281
DATA BYTES TRANSMITTED :                   96900
DATA BYTES RECEIVED :                      5307
```

Figure 2-11. Example SSITE Output of Route Parameters



DNCS Command Interpreter

3.1 GENERAL INFORMATION

DNCS Command Interpreter (DNCS CI) commands enable you to monitor and control the resources that are part of your DNCS configuration. DNCS CI commands perform the following functions:

- Display the status of the resources that DNCS controls
- Start, stop, and restart resources
- Connect and disconnect circuits
- Assign backup ports
- Assign printers to stations
- Assign sites and routes
- Send single-line messages to one or all stations
- Request and terminate sessions with applications
- Download 914A terminals
- Dump memory for diagnostic purposes

You can issue the commands discussed in this section through the XCI command or from a terminal running one of the SNA Emulators. They are also issued, in batch format, by the network SCI commands. Paragraph 3.1.1 discusses DNCS CI access methods. You can also access DNCS CI via XCI in SCI batch format mode, as described in the *DNOS SCI Reference Manual*. When using batch format, if the DNCS CI command includes non-alphanumeric characters, (an equal sign (=), for example), the entire CI command must be enclosed in quotation marks. For example, XCI C = "D PGM DNCSCI ADR=0100".

DNCS CI is a general-purpose operator interface that supports the full range of packages that run on DNCS. Though commands relating to SNA specific or RFT specific resources are available as part of the standard DNCS nucleus package, they produce error messages if these resources are not included in your configuration.

You can use DNCS CI commands to start and stop resources as you need them, as long as the resources are defined as part of the configuration. With DNCS active, you can connect circuits and terminals to the configuration and then activate them using DNCS CI commands. You can also deactivate and remove resources, modify port/circuit assignments, and assign printers to stations while DNCS is active. CI also provides site management functions, which can display, add, modify, or delete site and route definitions if X.25 is part of your configuration.

However, DNCS CI commands do not allow you to add new resources to your configuration. This function can be accomplished only by the DNCS system generation utility, bid by the XDGU command. You can use DNCS CI to add remote site or route definitions for use with switched virtual circuits (switched VCs). Refer to the *DNOS DNCS System Generation Reference Manual* for information on XDGU. Before describing the individual commands, this section discusses access to DNCS CI, command syntax, display options, and resource states.

NOTE

Resource state changes and assignments initiated through DNCS CI remain effective only as long as DNCS is active. Resource state changes and assignments return to the configuration specified by the DNCS generation process when the system is restarted. When using DNCS CI to modify your configuration's port/circuit assignments for example, DNCS CI only modifies the logical configuration as it is known to the computer. You are responsible for making sure that the logical and physical configurations match.

3.1.1 Access to DNCS CI Commands

The method you use to access DNCS CI depends on your type of station and the configuration of your system. The following paragraphs describe the four methods of accessing DNCS CI:

- Access through the VDT2 Emulator — Uses the DNCS/SNA Emulator software, a TI video display terminal (VDT), and the Emulator interface.
- Access through the 914A terminal — Uses the DNCS 914A terminal support software, a 914A terminal, and the Emulator interface.
- Access through the KSR Emulator — Uses the DNCS/SNA Emulator software, a Texas Instruments keyboard send/receive (KSR) terminal, and the Emulator interface.
- Access through the nucleus (XCI and SCI commands) — Uses the DNCS nucleus software and the CIRES resource with its attached CIPC circuit.

All these methods assume that the DNCS job is active under DNOS. Refer to paragraph 4.1 for information on activating DNCS.

Some DNCS CI commands provide default values based on the source of the command. Access through one of the emulators provides the needed default value. For example, if you enter only the DISPLAY command verb from an emulator, the default values return a display of the status of the station that issued the command.

You can access DNCS CI through XCI from any DNOS station. DNCS CI does not provide any default values because DNCS CI cannot determine the source of the command. An error occurs if you enter only the DISPLAY command verb from XCI because DNCS CI does not provide the default value to identify the station issuing the command. This also applies to the HARDCOPY command. Entering just HARDCOPY from an emulator station displays the hardcopy assignment for the station issuing the command. Entering just HARDCOPY, without a station ID, from XCI produces an error message.

Some configurations implement DNCS password security on the DNCS CI commands. If your configuration requires a password, you should enter it as part of the command, as follows:

```
PSW = <password>
```

3.1.1.1 Access Through VDT2 Emulator. With the VDT2 Emulator, you request access to DNCS CI by pressing the Exit key and then the S key. The initial DNCS CI display appears on the VDT screen along with the DNCS CI prompt (!). You do not need the nucleus interface as part of your configuration to access DNCS CI through a VDT2 Emulator. When accessing DNCS CI through the VDT2 Emulator, you cannot use the network SCI commands. You must use the commands described in this section.

You can press the Exit key and then the S key to return to the initial display while in session with a host application. Press the Exit key and then the Q key to terminate the VDT2 Emulator. Refer to the *DNOS DNCS/SNA User's Guide* for information on activating the VDT2 Emulator.

Figure 3-1 shows an example of the initial DNCS CI display for the display station named VDT01.

3.1.1.2 Access Through 914A Terminal. On a 914A terminal, you request access to DNCS CI by pressing the TEST REQ key. This causes DNCS to show the initial DNCS CI display and the DNCS CI prompt (!). This display provides information about the station and the applications that are associated with its mode keys. Figure 3-2 shows an example of a screen displayed on the 914A display station named V914A1. You do not need the nucleus interface as part of your configuration to access DNCS CI through a 914A terminal. However, when using a 914A, you cannot issue the network SCI commands. You must use the CI commands described in this section.

```

TEXAS INSTRUMENTS -- DNCS COMMAND PROCESSOR (1.2) TLID=ST01
MODE -SYNONYM- ----HOST NAME---- PERM ---STATE---
SYS1 IMS V1.ALEIMA * logged off

```

Figure 3-1. VDT2 Initial DNCS CI Display

```

TEXAS INSTRUMENTS -- DNCS COMMAND PROCESSOR (1.2) TLID=V914A1
MODE -SYNONYM- ----HOST NAME---- PERM ----STATE----
SYS1 IMS V1.ALEIMA * logged off
SYS2 TSO V1.ADATSA * logged off

```

Figure 3-2. 914A Initial DNCS CI Display

3.1.1.3 Access Through KSR Emulator. You can access DNCS CI with the KSR Emulator by using the following steps:

1. Enter the Start-of-Message sequence.
2. Enter an ! and a DNCS CI command.
3. Enter the End-of-Message sequence.

Refer to the *DNOS DNCS/SNA User's Guide* for information on using the KSR Emulator.

When using the KSR Emulator, you cannot issue the network SCI commands. You must use the CI commands described in this section.

3.1.1.4 Access Through the Nucleus. Any terminal that executes SCI can issue DNCS CI commands through the XCI command if the nucleus interface is part of the DNCS configuration.

Prompts

```

EXECUTE DNCS COMMAND INTERPRETER
COMMAND?:
LISTING ACCESS NAME:

```

Prompt Responses

COMMAND?

Enter a complete DNCS CI command.

LISTING ACCESS NAME:

Enter the pathname of the file that receives any display produced by the command. The default is the terminal local file (TLF) of your station.

Usage

You can issue any DNCS CI command (except Log On) by entering the XCI command. Enter the DNCS CI command in response to the COMMAND? prompt, just as you would from the VDT2 Emulator or 914A terminal. Since DNCS CI handles commands from all users on a first-come-first-served basis, you might have to wait a few seconds for your command to be processed. If DNCS CI cannot execute your command within 60 seconds, it returns control to your station without performing the command.

When you accept the default for the LISTING ACCESS NAME prompt, you receive the resulting display on your screen. Function keys allow you to page through DNCS CI displays in the same way as the Show File (SF) command. Unlike SF displays however, the XCI display remains on the screen after you press the Command key. This allows you to view the result of one command while entering the next command in batch format.

For hard-copy output, you must specify a file in response to the LISTING ACCESS NAME prompt and then print the file. XCI does not allow you to send the output directly to a printer or spooler.

Results

When you issue a DNCS CI command through XCI, the DNCS nucleus performs the command and returns any resulting display to your screen or file. DNCS CI commands can start, stop, and restart resources controlled by DNCS and can provide a variety of resource displays. For a complete account of the results of your command and for an explanation of the displays, refer to the individual command descriptions presented in this section.

Messages

For a complete list of DNCS CI messages, refer to Appendix A.

3.1.2 CI Help Files

DNCS CI provides a series of help files to assist you in using your system. You can show the main help file by entering HELP in place of a DNCS CI command. This main help file describes the four other help files available and concludes with a few notes on DNCS CI syntax and display options. The display help file is shown by entering DISPLAY HELP in place of a DNCS CI command. This file describes the commands you use to perform the available display functions. The help file for configuration commands is shown by entering ASSIGN HELP in place of a DNCS CI command. This file describes the commands you use to perform the configuration functions provided by DNCS CI. The help file for activation commands is shown by entering START HELP in place of a DNCS CI command. This file describes the commands you use to perform the available activation functions. The help file for miscellaneous commands is shown by entering VARY HELP in place of a DNCS CI command. This file describes the commands you use to perform the password, flash, log on, log off, and download functions.

3.1.3 Command Overview

The following paragraphs provide an overview of the DNCS CI commands. For complete details, refer to the individual command descriptions presented later in this section.

3.1.3.1 Command Types. DNCS CI provides the following types of commands:

- Configuration commands — Dynamically modify the DNCS configuration. The Assign, Backup, and Restore commands modify port/circuit assignments in the configuration. The Hard-Copy command assigns printer stations to serve Print keys on display stations. The Assign Site and Route commands control your configuration of switched VCs on an X.25 network.
- Activation commands — Activate and deactivate the resources that DNCS controls. The Start, Stop, and Restart commands change the states of boards, ports, circuits, and stations.
- Application session commands — Establish and terminate sessions with application programs on an SNA host computer. The Log On command establishes or returns to a session with an application program such as IMS. (DNCS also provides an automatic log-on capability using mode definitions.) The Log Off command terminates the session.
- Display commands — Display the characteristics and states of the resources controlled by DNCS.

3.1.3.2 Command Syntax Rules. The following rules apply to DNCS CI commands:

- You must separate the command verb, resource names, and keywords in the command with delimiters. The command examples in this section use blanks as delimiters, but you can usually use any combination of blanks, commas, parentheses, and equal signs. The main exceptions are the keywords ID and APPL, which require an equal sign immediately after them. The following commands are equivalent:

```

ASSIGN NEWPSW PLOVER PSW XYZZY
ASSIGN = NEWPSW = PLOVER = PSW = XYZZY
ASSIGN, NEWPSW, PLOVER, PSW, XYZZY
ASSIGN, NEWPSW = PLOVER, PSW = XYZZY
ASSIGN NEWPSW = PLOVER PSW = XYZZY

```

- With a DNCS password assigned, all commands except Display, Download, Log Off, and Log On require a password field. You must enter the password as part of the command, as follows:

```
<command> PSW <password>
```

- The following rules concern numbers entered as part of a command:
 - Decimal numbers must not have leading zeros.
 - Hexadecimal numbers must be preceded by > or 0.
- You can enter command fields in any order, provided that variable information appears after the proper keyword. In case of duplicate fields, the one you enter last applies.

3.1.3.3 Command Descriptions. Each command discussion in this section includes the following topics as appropriate:

- **Function** — Brief description of the command action (not labeled)
- **Syntax** — Command syntax
- **Examples** — Examples of correctly formulated commands
- **Prerequisites** — Requirements for command execution
- **Results** — Results of command execution
- **Related commands** — Other commands typically used with the described command

Many commands produce displays for specified resources. Some displays cover several resources of a single type, while others cover two or more related resources of different types. To avoid repetition, this section describes the information displayed for each resource type only once—in a figure that accompanies the display command for that resource. References under the *Results* heading for other commands indicate the appropriate figures.

3.1.4 Display Options

The options discussed in the following paragraphs modify the amount of information a command displays. These options apply not only to the display commands, but also to the configuration and activation commands that produce displays—Start, Stop, Assign Circuit, Assign Port, and Assign Site. Enter the option as part of the command.

3.1.4.1 NONE Option. The NONE option displays only the information for the requested resource, suppressing the information for related resources which normally appears below the header. For example, the following command displays the characteristics and state of circuit C02, but not its stations:

```
DISPLAY C02 NONE
```

NONE is equivalent to the SHORT FORM option for the network SCI commands.

3.1.4.2 SKIP Option. The SKIP option suppresses the display of multiple resources of the same type. For a display that normally lists multiple occurrences of a resource, the SKIP option causes the display to omit a specified number of occurrences. The resources skipped are those that would normally have appeared first on the display. This allows you to display resources that would not normally appear on the 21-line display. This is especially useful when accessing CI from a VDT2 Emulator, where the display is limited to 21 lines.

The SKIP option applies to all commands that produce displays, not just the Display commands. To use the SKIP option, include the following syntax as part of the command:

```
SKIP < occurrences>
```

where:

< occurrences> is the number of occurrences to skip.

For example, Display Circuit normally lists all circuits in the configuration. Include a SKIP 2 option as part of the command to suppress the first two circuits, as follows:

```
DISPLAY CIRCUITS SKIP 2
```

3.1.4.3 LINES Option. The LINES option specifies the maximum number of lines that a Display command displays on the screen. The default value for the LINES option is 21. If you specify more lines than the screen of the VDT can display, the extra lines overwrite the top portion of the display. You do not need to use this option with commands entered via XCI, since XCI returns the complete display to the TLF or listing file.

Enter the LINES option in the following format:

```
LINES < lines>
```

where:

< lines> is the number of lines displayed on the screen.

The following example shows the use of the LINES option to obtain 23 lines of information on a station display:

```
DISPLAY TERMS LINES 23
```

3.1.4.4 ADR Option. The ADR option has two functions. First, it specifies the starting address for the Display FCCC/TASK Memory command. These commands display 256 bytes of data beginning at the specified address. The following example displays the memory of board B02 beginning at address 08020:

```
DISPLAY PGM B02 ADR 08020
```

The second function of the ADR option is to list the stations on a circuit to be started, stopped, or restarted. The keyword ADR precedes a list of station IDs, separated by commas or hyphens. (The hyphen denotes a range of station IDs.) For example, the following Start Station command starts stations 01, 02, 03, 04, 05, 06, 07, and 09 on circuit C02:

```
START C02 ADR = 01 - 07,09
```

3.1.4.5 STATS Option. The STATS option displays the statistics counters for the following:

- A circuit or port supporting a synchronous data link control (SDLC) line to the SNA host if you have the SNA package installed
- Data terminal equipment (DTE) and virtual circuits (VC) if you have the DNOS DNCS X.25 Remote File Transfer (RFT) package installed
- Sites table containing route and site descriptors

The STATS option may be used in conjunction with or in place of the DISPLAY command. For example, either of the following commands displays the statistics for circuit C01, assuming C01 is an SDLC line:

```
DISPLAY C01 STATS
      or
STATS C01
```

Either of the following commands displays the statistics for a DTE with network address 106000022:

```
DISPLAY X25NA "106000022" STATS
      or
STATS X25NA "106000022"
```

The STATS option also works as a DISPLAY command. If the circuit or port specified does not support an SDLC line, the status of that circuit or port is displayed, but the message DNCS0042 E BOARD I/O ERROR appears at the bottom in place of the DISPLAY COMPLETE message.

3.1.4.6 ACTSTS Option. The ACTSTS option initializes the statistics counters displayed by the STATS option. The counters are displayed prior to initialization. The following command initializes the counters for circuit C01, assuming that C01 supports an SDLC line:

```
ACTSTS C01
```

The following command initializes the statistics counters for a DTE with network address 106000022:

```
ACTSTS X25NA "106000022"
```

The following command initializes the site level statistics counters for the SHINER site:

```
ACTSTS SITE = SHINER
```

You can also reset route level statistics by using the route name instead of the site name as shown in the previous example.

3.1.5 Resource States

DNCS keeps a record of the current state of every resource in the configuration. DNCS CI displays the states of specified resources. Some commands function only with resources in required states, and others do not function with resources in prohibited states.

You cannot effectively manage the resources in the DNCS network without knowing their states. Tables 3-1 through 3-4 provide resource state information. The individual command descriptions presented in this section include discussions of the required and prohibited states for each command (under the *Prerequisites* heading) and indicate state changes resulting from the command (under the *Results* heading).

Table 3-1. DNCS Station States

State	Meaning
ACT	Active — Station can receive and send data if its circuit, port, and board are in the ALIVE state.
BUSY	Busy — Station is preparing to send data.
DOWNL	Downloading — V914 station is receiving download code.
ERROR	Error — Station is not operable because it has exceeded the data link error limit.
INACT	Inactive — Station has exceeded limit, been restarted, but not used.
INOP	Inoperative — Station is inoperative due to component failure (for example, a printer is out of paper). The communications capability is still present. Operator attention is probably needed to restore the station to active.
NEVAC	Never active — No information transfer has occurred for this resource since the prior initial program load (IPL).
STOP	Stopped — A DNCS command deactivated the station.
TMOUT	Timed out — Station has been deactivated because it did not respond within a predetermined time limit.

Table 3-2. Board, Port, and Circuit States

State	Meaning
ALIVE	Alive — Resource is capable of transporting data, if it is correctly connected to the 990 computer.
BCKUP	Backed up — Data traffic through the resource is now routed through its backup port.
ERROR	Error — Error has occurred while the resource was being activated or while in the ALIVE state.
PBKUP	Pending backup — Backup command for the resource is in execution.
PLOAD	Pending load — Resource (a CP503) is inactive until it receives a download of protocol code.
PSTOP	Pending stop — A DNCS CI command is stopping the resource.
RSTRT	Restarted — A DNCS CI command is restarting a resource.
STOP	Stopped — A DNCS CI command has deactivated the resource, or a port LUNO was not assigned to a port.
DISCN	Disconnected — Circuit has been physically disconnected from a port.

Table 3-3. PU States

State	Meaning
ACT	Active — PU has an active session with the virtual telecommunications access method (VTAM).
ACTP	Activation pending — PU is in a transition state to ACT.
ERROR	Error — Error occurred during resource activation or while the resource was active.
INAP	Inactivate Pending — PU has received a Deactivate command from the SNA host and is in the transition state to INACT.
NEVAC	Never active — PU has not been in the ACT state since the prior IPL.

Table 3-3. PU States (Continued)

State	Meaning
STOP	Stopped — A DNCS CI command has deactivated the PU.
INACT	Inactive — PU has been deactivated by command from host.
DISCN	Disconnected — PU is no longer communicating with host over packet-switching network (PSN).
CALLP	Call pending — DNCS is placing a call over PSN to host.
DISCP	Disconnect pending — A call to the host over a PSN is being disconnected, transition state to DISCN.

Table 3-4. LU States

State	Meaning
ACT	Active — LU is assigned to a station but is not in session with an application.
BOUND	Bound — LU is assigned to a station and is in session with an application.
BPEND	Bind pending — LU is in transition state to BOUND.
DTACT	Data traffic active — LU is bound, and data flow is allowed.
DTRST	Data traffic reset — LU is bound, but no data flow is allowed.
INACT	Inactive — LU is not active.
PEND	Pending — LU is either being activated or deactivated.
QUIES	Quiescent — Station has been stopped from sending by command from host.
RECV	Receiving — Data traffic is moving to station.
SEND	Sending — Data traffic is moving to host application.

3.1.6 Session Profiles and Bracketing

An LU session profile descriptor is an eight-character alphanumeric string that indicates the state of an LU session. The characters LU are followed by six characters that describe characteristics of the session. (If these characters are shown as asterisks, the LU is not in session.) Table 3-5 explains the format and meaning of these descriptors.

Table 3-5. LU Session Profile Descriptors

		Format: LUabcdef	
Value			Meaning
a	= X	—	Exception response chain
	R	—	Definite response chain
b	= 1	—	Bracket termination rule 1: conditional termination
	2	—	Bracket termination rule 2: unconditional termination
c	= C	—	LU sends change direction
	E	—	LU can send end bracket
d	= T	—	LU sends transparent (EBCDIC) data
	A	—	LU can send alternate (ASCII) code data
e	= F	—	Half-duplex flip-flop protocol (bracket protocol)
	C	—	Half-duplex chain contention protocol
f	= 3	—	Data traffic ready state is valid
	7	—	Data traffic ready state is invalid

In SNA, bracket protocol controls the flow of data between the station and the host application. Bracket protocol resolves contention between the station and application when both attempt to transmit to the other. It also allows the sender to indicate the end of its message and whether it expects a reply. Table 3-6 describes the various bracket states reported by DNCS.

Table 3-6. Bracket States

State	Meaning
BETB	Between brackets — Station and application are in session but are not currently exchanging data.
RCV	Receiving — Application is in a bracket, and the station expects a reply.
RCVC	Receiving change direction — Application has sent a change direction bracket to station and expects a reply.
RCVE	Receive end — Application has sent an end bracket to station and does not expect a reply.
SND	Sending — Station is in a bracket.
SNDE	Sending end — Station has sent an end bracket to application and does not expect a reply.
SNDC	Sending change direction — Station has sent a change direction bracket to the application and expects a reply.

3.2 DNCS CI COMMANDS

The following paragraphs describe the DNCS CI commands. The commands appear in alphabetical order:

Assign commands:

Backup Port
Circuit
Flash
Password
Route
Site

Backup commands:

Board
Circuit
Port

Cancel Password Command

Display commands:

Boards
Circuit
FCCC/Task memory
Node
Port
PU
Sites
Station
X.25 statistics

Download Command

Hard-Copy Command

Log Off Command

Log On Command

Restart commands:

Board
Circuit
Port
Station

Restore commands:

Board
Circuit
Port

Start commands:

Board
Circuit
Port
PSN PU
Station
X.25 statistics

Stop commands:

Board
Circuit
Port
PSN PU
Station

3.2.1 Assign Backup Port Command

The Assign Backup Port command assigns a backup to a specified port or cancels its current backup assignment.

Syntax

```
ASSIGN < port> TO < backup>
```

```
ASSIGN < port> DUMMY
```

where:

< port> is the name of the (primary) port.

< backup> is the name of the port used as a backup.

Examples

```
ASSIGN P011 TO P012
```

```
ASSIGN P013 DUMMY
```

```
ASSIGN P031 TO P032 PSW = DNCS
```

Prerequisites

Both ports must be in the STOP state.

This command requires the DNCS password, if assigned.

Results

The Assign Backup Port command defines a backup for the specified port. (Entering DUMMY instead of specifying a backup port cancels the current backup assignment.) The backup port does not have to reside on the same board as the primary port. However, the assignment made with Assign Backup Port remains only while DNCS is active. The command does not alter the current port/circuit assignment or change the states of the ports involved.

A message indicating the result of command execution appears on the screen. If the command succeeds, the rest of the screen shows a port display. Figure 3-7 describes the port information.

Related Commands

- Backup Port — Backs up the circuit on the specified port (paragraph 3.2.9)
- Restore Port — Restores the circuit to its original port assignment (paragraph 3.2.30)
- Start Port — Activates a port (paragraph 3.2.33)

3.2.2 Assign Circuit Command

The Assign Circuit command assigns a circuit to a port or cancels the current port assignment.

Syntax

```
ASSIGN < circuit> TO < port>
```

```
ASSIGN < circuit> DUMMY
```

where:

< circuit> is the name of a circuit.

< port> is the name of a port.

Examples

```
ASSIGN C01 TO P021
```

```
ASSIGN C02 DUMMY
```

```
ASSIGN C04 TO P031 PSW = DNCS
```

Prerequisites

The circuit and port must be in the STOP state, and the port must not have another circuit attached. You must manually connect the circuit to the port.

This command requires the DNCS password, if assigned.

Results

The Assign Circuit command associates the specified circuit with the specified port, allowing data to flow to the circuit through that port. The variation that uses the keyword DUMMY cancels the current port assignment for the specified circuit. The circuit and port remain in the STOP state following command execution.

A message indicating the result of command execution appears on the bottom line of the screen. If the command succeeds, the rest of the screen shows a combined display for the circuit and port. Figure 3-4 describes the circuit information, and Figure 3-7 describes the port information.

Related Commands

- Display Circuit — Displays the characteristics and the current status of the specified circuit (paragraph 3.2.12)
- Backup Circuit — Assigns the circuit to a backup port (paragraph 3.2.8)
- Restore Circuit — Restores the circuit to its original port assignment (paragraph 3.2.29)

3.2.3 Assign Flash Command

The Assign Flash command sends a message to stations in the configuration. You can specify a particular station to receive the message or call for DNCS CI to send it to all display stations in the configuration.

Syntax

```
ASSIGN [< station> ] FLASH < message>
```

where:

< station> is the name of a station.

< message> is a string of 1 to 58 characters enclosed in quotation marks or apostrophes.

Examples

```
ASSIGN FLASH "SYSTEM IS READY FOR USE."
```

```
ASSIGN VDT06 FLASH 'PLEASE LOG OFF'
```

```
ASSIGN FLASH "SYSTEM DOWN FOR 5 MINUTES" PSW = DNCS
```

Prerequisites

This command requires the DNCS password, if assigned.

Results

The Assign Flash command places the message into a flash buffer. If the command specifies a station, only that station can receive the message in the buffer. Otherwise, the message goes to all display stations in the configuration. When the station operator takes an action, DNCS transmits the message to the station, where it appears on the bottom line of the screen. Until the station operator receives the message and acknowledges it by pressing RETURN, FLS appears in the OTHER_INFO field of the station display. Since DNCS supports only one flash buffer, subsequent use of Assign Flash overwrites the previous message, even if the message has not yet been displayed.

3.2.4 Assign Password Command

The Assign Password command enables the DNCS CI password option and assigns a value to the password.

Syntax

```
ASSIGN NEWPSW < password>
```

where:

< password> is a string of up to eight characters. Unless it begins with a letter and contains no special characters, it must be enclosed in quotation marks or apostrophes.

Examples

```
ASSIGN NEWPSW XYZZY
```

```
ASSIGN NEWPSW PLUGH PSW = XYZZY
```

```
ASSIGN NEWPSW "123" PSW DNCS
```

```
ASSIGN NEWPSW "2A + B - C = D" PSW "123"
```

```
ASSIGN NEWPSW '@2$ ""':'
```

Prerequisites

This command requires the (old) DNCS password, if assigned.

Results

The Assign Password command establishes password security over all DNCS CI commands except Display, Download, Log Off, and Log On. Once you assign a DNCS password, users must include the keyword PSW and the DNCS password in their commands, as described in paragraph 3.1.3.2. The password remains in effect until you change it or cancel it—or until you terminate DNCS.

Each time XDNCS is executed, the password option is disabled and any command can be executed without a password. To maintain security over the configuration and activation commands, you must assign a password each time you activate DNCS.

Related Commands

- **Cancel Password** — Cancels the current DNCS CI password, enabling all DNCS users to execute any DNCS CI command (paragraph 3.2.10)

3.2.5 Assign Route Command

The Assign Route command adds, modifies, or deletes the definition of a remote route under a site that accesses an X.25 network through a switched VC. To assign a route to a site, you must first assign the site. If your configuration uses a disk-resident sites table, any changes you make to your sites table become a permanent part of your configuration. If you terminate DNCS and reactivate it, DNCS reads the disk-resident sites table into memory so that it contains the same definitions that it did before termination. If your configuration does not use a disk-resident table, any dynamic modifications you make apply only until DNCS terminates.

Before you can use an assigned site, you must also assign at least one route to it. The route assignment specifies most of the parameters for the connection, including the network name and address. The network address that you assign to the local route identifies the DTE used for transmission. The subscription address you specify for a remote route identifies the remote configuration's network subscription address.

When using DNCS CI to add sites and routes, be careful not to confuse routes and sites. Choose a unique name for each site and route. Most RFT command procedures allow you to specify either a route or a site. Refer to the *DNOS DNCS X.25 Remote File Transfer (RFT) User's Guide*.

Syntax

```
ASSIGN < routename> SITE = < sitename> NETWORK = < "networkname">
      X25NA = < "subscriber address"> [RCOUT] [CUG = < cug> ]
      [FAC = < "user facilities"> ][PSW = < password> ]
```

```
ASSIGN SITE = < routename> DUMMY PSW = < password>
```

where:

< routename>	is the name of the remote route.
< sitename>	is the name of the remote site.
< "networkname">	is the name of the network.
< "subscriber address">	is the network subscription address, consisting of up to 15 decimal digits enclosed in quotes.
[RCOUT]	is a keyword that specifies that the remote configuration accepts a reverse charge call. If you do not include RCOUT in the command, CI specifies that the remote route does not accept a reverse charge call.
< cug>	is the closed user group number, from 0 – 255, decimal or hexadecimal.
< "user facilities">	is an optional field for network dependent parameters, consisting of up to 6 decimal digits.
< password>	is the DNCS password, if assigned.

Examples

```
ASSIGN SHINER1 SITE = SHINER NETWORK = "TELENET"
X25NA = "5152506393" RCOU
```

```
ASSIGN BASTROP1 SITE = BASTROP NETWORK = "LEASED"
X25NA = "5122725173" CUG = 19
```

```
ASSIGN QUILMES1 SITE = QUILMES NETWORK = "ARPAC"
X25NA = "09565532"
```

```
ASSIGN SITE = SHINER1 DUMMY
```

```
ASSIGN LONDON1 SITE = LONDON NETWORK = "PSS"
X25NA = "704620" CUG = 05
```

Prerequisites

If the route name does not exist and your configuration does not use a disk-resident table, there must be an available entry in the memory-resident sites table. DNCS system generation establishes the size of the memory-resident sites table and whether a disk-resident table is used. If your configuration does not include X.25, executing this command produces an error.

If the route name already exists and a transmission to it is in progress, an error occurs when you attempt to modify or cancel the route name.

This command requires the DNCS password, if assigned.

Results

The Assign Route command associates the specified route with its site and defines the route to the X.25 network. The variation that uses the keyword DUMMY deletes the specified route. If you do not specify a value for closed user group (CUG) or user facilities, CI assigns no CUG or user facilities.

A message indicating the result of command execution appears on the bottom line of the screen.

Related Commands

- Assign Site — Assigns site (paragraph 3.2.6)
- Display Site — Displays the current contents of the sites table and/or site statistics (paragraph 3.2.17)
- Display X.25 Statistics — Displays X.25 level statistics (paragraph 3.2.19)

3.2.6 Assign Site Command

The Assign Site command adds, modifies, or deletes the definition of a remote site that accesses an X.25 network through a switched VC. If your configuration uses a disk-resident sites table, any changes you make to your sites table become a permanent part of your configuration. If you terminate DNCS and reactivate it, DNCS reads the disk-resident sites table into memory so that it contains the same definitions that it did before termination. If your configuration does not use a disk-resident table, any dynamic modifications you make apply only until DNCS terminates.

Before you can use an assigned site, you must also assign at least one route to it. The route assignment specifies most of the parameters for the connection, including the network name and address. The network address that you assign to the local route identifies the DTE your configuration uses to communicate with the X.25 network. The network subscription address you specify for remote routes allows your configuration to access remote configurations through the network.

When using DNCS CI to add remote sites and routes, be careful not to confuse routes and sites. Choose a unique name for each site and route. Most RFT command procedures allow you to specify either a route or a site. Refer to the *DNOS DNCS X.25 Remote File Transfer (RFT) User's Guide*.

Syntax

```
ASSIGN SITE = < sitename> [RCIN] PSW = < password>
```

```
ASSIGN SITE = < sitename> DUMMY PSW = < password>
```

where:

< sitename> is the name of the remote site.

[RCIN] is a keyword specifying that the remote configuration can initiate a reverse charge call. If you do not include RCIN in the command, CI specifies that the remote site cannot initiate a reverse charge call.

< password> is the DNCS password.

Examples

```
ASSIGN SITE = SHINER RCIN
```

```
ASSIGN SITE = SHINER DUMMY
```

```
ASSIGN SITE = BASTROP PSW = DNCS
```

```
ASSIGN SITE = AUSTINTX RCIN PSW = DNCS
```

Prerequisites

If the site name does not exist and your configuration does not use a disk-resident table, there must be an available entry in the memory-resident sites table. DNCS system generation establishes the size of the memory-resident sites table and whether a disk-resident table is used.

If the site name already exists and a transmission to it is in progress, an error occurs when you attempt to modify or delete the site name. If your configuration does not include X.25, executing this command produces an error.

This command requires the DNCS password, if assigned.

Results

The Assign Site command associates the specified remote site name with the reverse-charging parameter and with internal pointers to the route or routes belonging to the site. The variation that uses the keyword DUMMY deletes the specified site. When you cancel a site assignment, CI also deletes any routes assigned to the site.

A message indicating the result of command execution appears on the bottom line of the screen.

Related Commands

- **Assign Route** — Assigns routes to a site (paragraph 3.2.5)
- **Display Sites** — Displays the current contents of the sites table and/or site statistics (paragraph 3.2.17)
- **Display X.25 Statistics** — Displays X.25 level statistics (paragraph 3.2.19)

3.2.7 Backup Board Command

The Backup Board command assigns each circuit on a board to its backup port.

Syntax

```
BACKUP < boardname>
```

where:

< boardname> is the name of the physical board.

B is the abbreviation for BACKUP.

Examples

```
BACKUP B01
```

```
B B03
```

```
BACKUP B03 PSW = DNCS
```

Prerequisites

All cables connecting the modems to the specified board must be manually moved from their primary ports on the board to their backup ports. The primary ports must not be in the STOP or BCKUP state. The backup ports must reside on boards that support the same line control discipline (LCD) as the specified board. (See the *DNOS DNCS System Generation Reference Manual*.)

This command requires the DNCS password, if assigned.

Results

This Backup Board command assigns all circuits on the specified board to their backup ports. It stops each primary port that has a circuit attached, changes the port/circuit assignments, and starts the backup ports. The new port/circuit assignments remain in effect until the circuits are restored or reassigned or until DNCS is terminated.

A message indicating the results of command execution appears on the bottom line of the screen. If the command succeeds, the rest of the screen shows a combined display for the specified board and its ports. Figure 3-4 describes the board information display. Figure 3-7 describes the port information.

Related Commands

- Restore Board — Restores all circuits on the board to their primary ports (paragraph 3.2.28)
- Backup Port — Assigns a circuit attached to a specified port to its backup (paragraph 3.2.9)

3.2.8 Backup Circuit Command

The Backup Circuit command logically connects a circuit to its backup port. The assignment remains in effect until the circuit is restored to its original port. (The Backup Circuit command has the same effect as the Backup Port command.)

Syntax

```
BACKUP < circuit >
```

where:

< circuit > is the name of the circuit.

B is the abbreviation for BACKUP.

Examples

```
BACKUP C01
```

```
B C04
```

```
BACKUP C04 PSW = DNCS
```

Prerequisites

The cable to the modem for the specified circuit must currently be attached to its primary port. The primary port must not be in the STOP or BCKUP states. The backup port must reside on a board that supports the protocol for the specified circuit (see the *DNOS DNCS System Generation Reference Manual*.) Also, the backup port must not already have a circuit attached. You must manually move the modem cable for the circuit from its primary port to its backup port.

This command requires the DNCS password, if assigned.

Results

The Backup Circuit command stops the primary port, changes the port/circuit assignment from the primary to the backup, and starts the backup port. You must manually move the modem cable for the specified circuit to the backup port before data can flow through the backup port.

A message indicating the result of command execution appears on the bottom line of the screen. If the command succeeds, the rest of the screen shows a combined display for the circuit and backup port. Figure 3-4 describes the circuit information. Figure 3-7 describes the port information.

Related Commands

- Restore Circuit — Restores a circuit to its original port (paragraph 3.2.29)
- Assign Circuit — Assigns the circuit to a port (paragraph 3.2.2)
- Display Circuit — Displays the characteristics and the current status of the specified circuit (paragraph 3.2.12)

3.2.9 Backup Port Command

The Backup Port command assigns the circuit attached to a specified port to its backup port. The new assignment remains in effect until the port is restored. (The Backup Port command has the same effect as the Backup Circuit command.)

Syntax

```
BACKUP < port >
```

where:

< port > is the name of the port being backed up.

B is the abbreviation for BACKUP.

Examples

```
BACKUP P011
```

```
B P031
```

```
BACKUP P013 PSW = DNCS
```

Prerequisites

The specified port must have a backup assignment that was assigned by the Assign Port command or XDGU. The primary port must not be in the STOP or BCKUP states. The backup port must reside on a board that supports the protocol for the specified circuit. (See the *DNOS DNCS System Generation Reference Manual*.) Also, the backup port must not already have a circuit attached. You must manually move the modem cable for the circuit from the specified primary port to its backup port.

This command requires the DNCS password, if assigned.

Results

The Backup Port command reassigns the circuit to the backup for the specified port and also starts the backup. The new port/circuit assignment remains in effect until the circuit is reassigned or restored to its original port or until DNCS is terminated. Although DNCS recognizes that the circuit is connected to its backup port, you must physically disconnect the modem cable for the circuit from its primary port and connect it to its backup port before you can use the circuit.

The command displays a completion message on the bottom line of the screen. If the command succeeds, the rest of the screen shows a combined display for the backup port and the circuit. Figure 3-4 describes the displayed circuit information, and Figure 3-7 describes the port information.

Related Commands

- Restore Port — Restores the circuit to its primary port (paragraph 3.2.30)
- Assign Backup Port — Assigns the backup for a port (paragraph 3.2.1)
- Backup Port — Assigns the backup for a port (paragraph 3.2.9)
- Display Port — Displays the characteristics and the current status of the named port (paragraph 3.2.15)

3.2.10 Cancel Password Command

The Cancel Password command cancels the current DNCS password. Without a DNCS password assigned, users can enter any DNCS CI command.

Syntax

```
CANCEL PSW < password >
```

where:

< password > is the current DNCS password.

Examples

```
CANCEL PSW ABC123
```

```
CANCEL PSW '@2$ ""':'
```

Results

The Cancel Password command disables password security on DNCS CI commands. After password cancellation, users do not need to include a password field in configuration or activation commands. Password security remains disabled until you assign a new password.

Related Commands

- Assign Password — Assigns a value to the DNCS CI password and enables the password option on DNCS CI configuration and activation commands (paragraph 3.2.4)

3.2.11 Display Boards Command

Syntax

```
DISPLAY [ACT/INACT] < board>
```

```
DISPLAY [ACT/INACT] BOARDS
```

where:

< board> is a DNCS board name (such as, B01)

DIS and D are abbreviations for DISPLAY. A is the abbreviation for ACT. I is the abbreviation for INACT.

Examples

```
DISPLAY BOARDS
```

```
DISPLAY B01
```

```
DIS ACT BOARDS
```

```
D B02
```

Results

The Display Boards command displays the characteristics and current states of the boards in the configuration. Display command options increase or decrease the number of lines displayed. The following command syntax determines which resources are displayed:

- Board name — Specified board and its ports
- Keyword ACT and board name — Specified board and any of its ports not in the STOP state
- Keyword INACT and board name — Specified board and any of its ports in the STOP state
- Keyword BOARDS — All boards in the configuration
- Keywords ACT and BOARDS — All boards not in the STOP state
- Keywords INACT and BOARDS — All boards in the STOP state

Figure 3-3 shows the board display, and Table 3-7 describes board display headers.

Related Commands

- Display FCCC/Task Memory — Displays the CP503 (FCCC) random-access memory (RAM) (paragraph 3.2.13)

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

BOARD  STATE  ADDRESS  FIRST PORT NO OF PORTS  DNLDCODE  TYPE  CODEADR  CODELEN
B01    ALIVE   F900    P011          1           01    SDLC    8DEE    116C
B02    ALIVE   FFFF    P021          2           00    NONE    0000    0000
B03    STOP    0000    P031          1           00    NONE    0000    0000

DNCS0050 I DISPLAY COMPLETE

```

Figure 3-3. Board Display

Table 3-7. Board Display Header Descriptions

Header	Description
BOARD	DNCS name of the board
STATE	Current state of the board (refer to Table 3-2)
ADDRESS	Address of the board
FIRST_PORT	Name of the first port on the board
NO_OF_PORTS	Number of ports on the board that are part of the DNCS configuration
DNLDCODE	Download protocol: 00 — None, 01 — SDLC, 04 — LAP, 06 — LOCAL
TYPE	Type of protocol that the board uses
CODEADR	Address of the first byte of download code
CODELEN	Length of the download code

3.2.12 Display Circuit Command

The Display Circuit command displays circuit characteristics and states. You can display a specified circuit, all circuits, all active circuits, or all inactive circuits.

Syntax

```
DISPLAY [ACT/INACT] < circuit>
```

```
DISPLAY [ACT/INACT] CIRCUITS
```

where:

< circuit> is the name of the circuit.

DIS and D are abbreviations for DISPLAY. CIR is the abbreviation for CIRCUITS. A is the abbreviation for ACT. I is the abbreviation for INACT.

Examples

```
DISPLAY CIRCUITS
```

```
DISPLAY C01
```

```
DIS INACT CIRCUITS
```

```
D A CIR
```

Results

The Display Circuit command displays circuit information. Display command options (see paragraph 3.1.4) reduce or increase the number of lines displayed. The following command syntax determines which resources are displayed:

- Circuit name — Specified circuit, its current port (or PU if the circuit uses SDLC protocol), and all of its stations
- Keyword ACT and circuit name — Specified circuit, its current port, and all of its stations in the ACT state
- Keyword INACT and circuit name — Specified circuit, its current port, and all of its stations not in the ACT state
- Keyword CIRCUITS — All circuits in the configuration
- Keywords ACT and CIRCUITS — All circuits in ALIVE or PLOAD states
- Keywords INACT and CIRCUITS — All circuits not in ALIVE or PLOAD states

Figure 3-4 shows the circuit display and Table 3-8 describes circuit display headers. Figure 3-7 shows the port display, and Table 3-10 describes port display headers. Figure 3-8 shows the PU displays, and Table 3-11 describes PU display headers.

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

CIR_NAME  CIR_STATE  PORTNAME  CIR_TYPE  RQ  WQ  OUTQ  DNLQ  ERR_LMT  NO_OF_DVC  CODE
C01        DISCN    P011      SDLC      0  0  0000  0000    0         1         01
C02        ALIVE    P021      CIPC      3  0  0000  0000    0         11        00
C03        ALIVE    P022      CI        2  0  0000  0000    0         1         00
C04        STOP     P031      RDTG      0  0  0000  0000    5         3         06

DNCS0050 I DISPLAY COMPLETE

```

Figure 3-4. Circuit Display

Table 3-8. Circuit Display Header Descriptions

Header	Description
CIR_NAME	DNCS name of the circuit
CIR_STATE	Current state of the circuit (see Table 3-2)
PORTNAME	Circuit connects to this port
CIR_TYPE	Protocol that the circuit uses
RQ	Current length of the read queue
WQ	Current length of the write queue
OUTQ	ID of the first buffer in the output queue
DNLQ	ID of the first buffer in the download queue
ERR_LMT	Error limit for the circuit
NO_OF_DVC	Number of devices that use the circuit
CODE	Download protocol: 00 — None, 01 — SDLC, 04 — LAP, 06 — LOCAL

Related Commands

- **Display Port** — Displays the characteristics of all ports or the specified port and the circuits connected to it (paragraph 3.2.15)
- **Display Boards** — Displays the characteristics of a board and the ports and circuits associated with it (paragraph 3.2.11)

3.2.13 Display FCCC/Task Memory Command

The Display FCCC/Task Memory command displays specific sections of CP503 (FCCC) RAM or DNCS task memory. DNCS CI provides this command for diagnosing problems. You are not expected to interpret the results.

Syntax

DISPLAY PGM < fccc> [ADR < address>]

or

DISPLAY PGM < task> [ADR < address>]

where:

< fccc> is the DNCS name of a CP503 (FCCC) board.

< task> is one of the following tasks: DNCSSCT, DNCSCI, DNCSPDCT, DNCSTSR, DNCSPC, DNCSDC, DNCSNAP, DNCSTSR, DNCSTRP, DNCSNIA, or DNCSINAP.

< address> is the starting memory address of the task (default zero) or the starting memory address of the CP503 (FCCC) RAM (default 08000).

DIS and D are abbreviations for DISPLAY.

CP503 Examples

DISPLAY PGM B01

DISPLAY PGM B01 ADR 08020

DIS PGM B03

D PGM B03 ADR 08140

Task Examples

DISPLAY PGM DNCSSCT

DISPLAY PGM DNCSPDCT ADR 00220

DIS PGM DNCSDC ADR 00040

D PGM DNCSCI

Prerequisites

The board must be a CP503 (FCCC) with at least one usable port.

Results

The Display FCCC/Task Memory command displays 256 bytes of the CP503 (FCCC) RAM or 256 bytes of memory from the specified task. Figure 3-5 shows a memory display. The display uses the following line to identify the memory as belonging to a task or to a board:

DISPLAY MEMORY, PROGRAM = < board name or task name >

Related Commands

- Display Board — Displays the characteristics and the current status of the CP503 (paragraph 3.2.11)

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

DISPLAY MEMORY, PROGRAM = DNCSCI

0000  0001 000A  2F00 0000  0000 0000  0000 0400  *.../.....*
0010  2FE0 0004  2FE0 000E  0002 FFFF  0007 0002  */.../.....*
0020  2FE0 000E  FFFF 0005  01CA 015A  0001 000C  */.....Z....*
0030  0001 0000  0002 0000  0000 0000  0009 0000  *.....*
0040  444E 4353  5343 5420  0001 5700  0000 0000  *DNCS SCT ..W....*
0050  002A 0002  0011 0001  0000 0002  0000 0000  *.*.....*
0060  0000 FD26  0000 444E  4353 434C  4F4B 0000  *...&..DNCS CLOK..*
0070  0000 0000  0000 0050  0003 0013  0001 0000  *.....P.....*
0080  0003 1100  0104 7FC5  0000 0000  444E 4353  *.....DNCS*
0090  4349 2020  0001 C020  0000 0000  00C2 0000  *CI ... ..*
00A0  0000 0000  0000 0000  0000 0000  0000 0000  *.....*
00B0  0000 0000  0000 0000  0000 0000  0000 0000  *.....*
00C0  0000 0076  0005 0015  0001 0000  0002 1100  *.....*
00D0  0104 7FC5  0000 0000  444E 4353  5044 4354  *.....DNCS PDCT*
00E0  0001 6960  0000 0000  010E 0006  0019 0001  *.....*
00F0  0000 0002  3500 0000  1B59 0001  0001 444E  *...5...Y...DN*

DNCS0050 I DISPLAY COMPLETE

```

Figure 3-5. FCCC/Task Memory Display

3.2.14 Display Node Command

The Display Node command displays the characteristics and current state of an LU.

Syntax

```
DISPLAY NODE <lu>
```

where:

<lu> is the LU name consisting of the letter L, followed by the last five characters of the PU name, followed by the hexadecimal equivalent of the LU number.

DIS and D are abbreviations for DISPLAY.

Examples

```
DISPLAY NODE LDAANR01
```

```
DIS NODE LDAANR02
```

```
D NODE LDAANR03
```

Prerequisites

The PU name must consist of six characters and begin with C. The SNA host administrator assigns PU names.

Results

The Display Node command displays information about a specified LU. If the LU belongs to a station, the command also provides station and circuit information. Display command options (paragraph 3.1.4) limit or increase the number of lines displayed.

Figure 3-6 shows the LU display, and Table 3-9 describes LU display headers. Figure 3-9 shows the station information on the combined displays.

Related Commands

- Display PU — Displays information about a PU (paragraph 3.2.16)

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

LUNAME LU_STATE PUNAME LU_NO BINDINFO M_KEY VPU_NAME APPLNAME TEMP_ASN
LDAANR06 INACT CDAANR 6

TERMNAME TERM_STATE CIR_NAME PADR DVCTYP CUR_LU IOERR/TOTAL BRKST OTHER_INFO
VDT06 NEVAC C02 0006 VDT 0/ 0 BETB

LUNAME LU_STATE PUNAME LU_NO BINDINFO M_KEY VPU_NAME APPLNAME TEMP_ASN
LDAANR06 INACT CDAANR 6 LU***** 1 V1 ALEIMA

CIR_NAME CIR_STATE PORTNAME CIR_TYPE RQ WQ OUTQ DNLQ ERRLMT NO_OF_DVC CODE
C02 ALIVE P021 CIPC 3 0 0000 0000 0 11 00

DNCS0050 I DISPLAY COMPLETE

```

Figure 3-6. LU Display

Table 3-9. LU Display Header Descriptions

Header	Description
LUNAME	Name of the LU associated with the node
LU_STATE	Current state of the LU (refer to Table 3-4)
PUNAME	Name of the PU
LU_NO	Number that is associated with the LU name
BINDINFO	LU session profile descriptor (refer to Table 3-5)
M_KEY	Mode key associated with the application
VPU_NAME	VPU name
APPLNAME	Name of the application associated with the LU
TEMP_ASSN	YES is a dynamically assigned (pooled) LU

3.2.15 Display Port Command

The Display Port command displays the characteristics and current states of ports in the DNCS configuration.

Syntax

```
DISPLAY [ACT/INACT] < port >
```

```
DISPLAY [ACT/INACT] PORTS
```

where:

< port > is the name of a port.

DIS and D are abbreviations for DISPLAY. A is the abbreviation for ACT. I is the abbreviation for INACT.

Examples

```
DISPLAY PORTS
```

```
DISPLAY P012
```

```
DIS A PORTS
```

```
D INACT P031
```

Results

The Display Port command displays port information. Display command options (see paragraph 3.1.4) limit or increase the number of lines displayed. The following command syntax determines which resources are displayed:

- Port name — Specified port, its circuit, and all stations on the circuit (or PU for an SDLC circuit)
- Keyword ACT and port name — Specified port, its circuit, and any stations on the circuit in the ACT state (or PU in the ACT state for an SDLC circuit)
- Keyword INACT and port name — Specified port, its circuit, and all stations on the circuit not in the ACT state (or PU not in the ACT state for an SDLC circuit)
- Keyword PORTS — All ports in the configuration
- Keywords ACT and PORTS — All ports not in the STOP state
- Keywords INACT and PORTS — All ports in the STOP state

Figure 3-7 shows the port display and Table 3-10 describes the port display headers. Figure 3-4 describes the circuit information, Figure 3-8 describes the PU information, and Figure 3-9 describes the station information on the combined displays.

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

PORTNAME STATE LUNO BOARD   CH CIR_NAME BKUPPORT XMTER/TOTAL RCVER/TOTAL RQ WQ
P011     DISCN  31  B01     0 C01           0/   0       0/   0 0 0
P021     ALIVE  32  B02     0 C02           0/   0       0/   0 3 0
P022     ALIVE  33  B02     0 C03           0/  51      13/  27 2 0
P031     STOP   34  B03     0 C04           0/   0       0/   0 0 0

DNCS0050 I DISPLAY COMPLETE

```

Figure 3-7. Port Display

Table 3-10. Port Display Header Descriptions

Header	Description
PORTNAME	Name of the port
STATE	Current port state (refer to Table 3-2)
LUNO	LUNO assigned to the port (hexadecimal)
BOARD	Board associated with the port
CH	Channel on board for CP503 (can be 0 - 3)
CIR_NAME	Name of the circuit connected to the port
BKUPPORT	Name of the backup port associated with the port (blank if no backup port is assigned)
XMTER/TOTAL	Number of transmission errors and total number of transmissions
RCVER/TOTAL	Number of reception errors and total number of receptions
RQ	Current length of the read queue
WQ	Current length of the write queue

Related Commands

- Display Circuit — Displays the characteristics and the current status of circuits (paragraph 3.2.12)
- Display Board — Displays the characteristics and current status of boards (paragraph 3.2.11)

3.2.16 Display PU Command

The Display PU command displays information about the PU (or PUs) in the DNCS configuration.

Syntax

```
DISPLAY [ACT/INACT] < pu >
```

```
DISPLAY [ACT/INACT] PU
```

where:

< pu > is the name of a PU.

DIS and D are abbreviations for DISPLAY. A is the abbreviation for ACT. I is the abbreviation for INACT.

Examples

```
DISPLAY INACT PU
```

```
DISPLAY CDAANR
```

```
DIS A PU
```

```
D A CDAANR
```

Results

The Display PU command displays the states and characteristics of PUs and related resources. Display command options (see paragraph 3.1.4) limit or increase the number of lines displayed. The following command syntax determines which resources are displayed:

- PU name — Specified PU and all of its LUs
- Keyword ACT and PU name — Specified PU and all of its LUs in the ACT state
- Keyword INACT and PU name — Specified PU and any of its LUs not in the ACT state
- Keyword PU — All PUs
- Keywords ACT and PU — All PUs in the ACT state
- Keywords INACT and PU — All PUs not in the ACT state

Figure 3-8 shows the PU display, and Table 3-11 describes PU display headers.

Related Commands

- Display Node — Displays the characteristics and the current status for an LU (paragraph 3.2.14)

```

TEXAS INSTRUMENTS - DNCS COMMAND PROCESSOR (RELEASE 1.2)

PUNAME   PU_STATE  CIR_NAME  ADDR/LCN  ACS_MTD   IOERR/TOTAL  NO_OF_LU
CDAANR   NEVAC    C01      0000     VTAM      0/ 0         14

DNCS0050 I DISPLAY COMPLETE

```

Figure 3-8. PU Display

Table 3-11. PU Display Header Descriptions

Header	Description
PUNAME	Name of the PU
PU_STATE	Current PU state (refer to Table 3-3)
CIR_NAME	Circuit associated with the PU
ADDR/LCN	Poll address of an SDLC line or the logical channel number of an X.25 line
ACS_MTD	PU access method (VTAM, PSN, or LOCAL)
IOERR/TOTAL	Number of I/O errors and total number of I/Os
NO_OF_LU	Number of LUs configured under the PU

3.2.17 Display Sites Command

The Display Sites command displays the contents of the memory sites table or the statistics kept for each site and route.

The DNCS SCI command SSITE is identical to the Display Sites command.

Syntax

```
DISPLAY SITES
```

```
DISPLAY SITE [sitename or routename]
```

```
STATS SITE [sitename or routename]
```

DISPLAY SITE [sitename or routename] STATS

where:

[sitename or routename] is the site or route name.

DIS and D are abbreviations for DISPLAY.

Examples

DISPLAY SITES

STATS SITE BASTROP1

Results

If you use the keyword STATS, the Display Sites command produces the statistics associated with the specified site and/or route entry. If you specify a particular route or site name in conjunction with STATS, only the statistics for the specified site or route appear. If you do not use the STATS keyword, the command displays the contents of the sites table. Refer to the SSITE command in Section 2.

Related Commands

- Assign Site — Adds, modifies, or deletes sites (paragraph 3.2.6)
- Assign Route — Adds, modifies, or deletes routes (paragraph 3.2.5)

3.2.18 Display Station Command

The Display Station command displays the characteristics and the current states of stations in the DNCS configuration.

Syntax

DISPLAY [ACT/INACT] [< station>]

DISPLAY [ACT/INACT] TERMS

where:

< station> is the name of a station.

DIS and D are abbreviations for DISPLAY. A is the abbreviation for ACT. I is the abbreviation for INACT.

Examples

DISPLAY TERMS

DISPLAY P914P1

DIS ACT VDT06

D I TERMS

Results

The Display Station command displays the characteristics and current states of stations and LUs. Display command options (see paragraph 3.1.4) increase or decrease the number of lines displayed. The following command syntax determines which resources are displayed:

- Station name — Specified station and its LUs
- Keyword ACT and station name — Specified station and all of its LUs in the ACT state
- Keyword INACT and station name — Specified station and all of its LUs not in the ACT state
- Keyword TERMS (for terminals) — All stations in the configuration
- Keywords ACT and TERMS — All stations in the ACT or BUSY states
- Keywords INACT and TERMS — All stations not in the ACT or BUSY states
- Default (no station name or keywords) — Station issuing the command and all of its LUs (use this option only from VDT2 or 914A)
- Keyword ACT — Station issuing command and all of its LUs in the ACT state (use this option only from VDT2 or a 914A)
- Keyword INACT — Station issuing the command and all of its LUs not in the ACT state (use this option only from VDT2 or a 914A)

Figure 3-9 shows the station display, and Table 3-12 describes the station display headers. Figure 3-6 describes the LU information on the combined displays.

Related Commands

- Display Circuit — Displays information about the circuit and the stations that are on the circuit (paragraph 3.2.12)

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TERMNAME	TERM_STATE	CIR_NAME	PADR	DVCTYP	CUR_LU	IOERR/TOTAL	BRKST	OTHER_INFO
VDT01	NEVAC	C02	0001	VDT		0/ 0	BETB	
VDT02	NEVAC	C02	0002	VDT		0/ 0	BETB	
VDT03	NEVAC	C02	0003	VDT		0/ 0	BETB	
VDT04	NEVAC	C02	0004	VDT		0/ 0	BETB	
VDT05	NEVAC	C02	0005	VDT		0/ 0	BETB	
VDT06	NEVAC	C02	0006	VDT		0/ 0	BETB	
VDT07	NEVAC	C02	0007	VDT		0/ 0	BETB	
VDT08	NEVAC	C02	0008	VDT		0/ 0	BETB	
PTR01	NEVAC	C02	0065	PTR1		0/ 0	BETB	
PTR02	NEVAC	C02	0066	PTR3		0/ 0	BETB	
VPSC1	NEVAC	C02	00C9	PSC2		0/ 0	BETB	
XCI1	BUSY		0000	CIRES		0/ 0	BETB	
V914A1	NEVAC	C04	0040	V914		0/ 0	BETB	
V914A2	NEVAC	C04	0041	V914		0/ 0	BETB	
P914P1	NEVAC	C04	0050	P914		0/ 0	BETB	

DNCS0050 I DISPLAY COMPLETE

Figure 3-9. Station Display

Table 3-12. Station Display Header Descriptions

Header	Description
TERMNAME	Name of the station
TERM_STATE	Current state of the station (refer to Table 3-1)
CIR_NAME	Name of the circuit associated with the station
PADR	Station ID (poll address) of the station
DVCTYP	Station type (refer to <i>DNOS DNCS System Generation Reference Manual</i>)
CUR_LU	Name of the current LU if in session
IOERR/TOTAL	Number of I/O errors and total number of I/Os
BRKST	Current bracket state (refer to Table 3-6)
OTHER_INFO	One or more of the following can be blank: WDE — Wait for device end RQA — Request queue active FLS — Flash message pending

3.2.19 Display X.25 Statistics Command

The Display X.25 Statistics command displays X.25 statistics for either all VCs or a specified VC at a given subscription address.

The DNCS network SCI command SRES X25 (abbreviated as SX25) is identical to Display X25 Statistics.

Syntax

```
DISPLAY X25NA <"subscriber address"> STATS
```

```
STATS X25NA <"subscriber address">
```

```
DISPLAY X25NA <"subscriber address"> VC=<vc> STATS
```

```
STATS X25NA <"subscriber address"> VC=<vc>
```

where:

<"subscriber address"> is the DTE's network address, consisting of up to 15 decimal digits enclosed in quotes.

<vc> is the VC attached to the local subscriber, or is a null entry meaning all VC statistics for that subscriber.

DIS and D are abbreviations for DISPLAY.

Examples

```
DISPLAY X25NA "106000022" STATS
```

```
STATS X25NA "106000023" VC = 01
```

Results

This command displays X.25 statistics. Refer to the SX25 command in Section 2.

Related Commands

- Start X.25 Statistics — Initializes values of counters that record X.25 statistics (paragraph 3.2.36)

3.2.20 Download Command

The Download command downloads the 914A terminal operating system to a 914A terminal configured for DNCS.

Syntax

```
DWNLD [[ID = ]< terminal> ]
```

where:

< terminal> is the station name of the 914A being downloaded.

The equal sign is a required delimiter.

Examples

```
DWNLD V914A01
```

```
DWNLD ID = V914A01
```

Prerequisites

The V914 station (914A terminal) must be in the ACT or BUSY state before it can receive the download. The command must be issued from a V914 or SNA Emulator station, not through XCI. If you enter the command from an SNA Emulator station, you must include the ID = keyword and the name of a V914 station in the command.

Results

The Download command loads the 914A terminal operating system into the 914A terminal memory. Unless you specify another terminal, the station at which you enter the command receives the download. That station must be a 914A.

If you enter the name of a VDT2 display station after ID = , DNCS clears the screen of that station. To return to DNCS CI, you must use the system request sequence (Exit + S).

3.2.21 Hard-Copy Command

The Hard-Copy command assigns printer stations to serve the Print keys on SNA VDT2 Emulator and 914A display stations. It also reports current hard-copy assignments.

Syntax

```
HARDCOPY [VDU < station> ] [< printer> ]
```

where:

< station> is the name of a display station.

< printer> is the name of a printer station.

H is the abbreviation for HARDCOPY.

Examples

HARDCOPY

HARDCOPY VDU VDT02 PTR01

H VDT06

H PTR01 PSW = DNCS

Prerequisites

This command requires the DNCS password, if assigned.

Results

Hard-copy command results depend on the command you enter, as follows:

- **Default (no keywords or station specifications)** — Reports the current hard-copy assignment for the display station issuing the command. You cannot use the default if you have accessed DNCS CI by using the XCI command.
- **Keyword VDU and display station name** — Reports the current hard-copy assignment for the specified station.
- **Keyword VDU, display station name, and printer station name** — Assigns the specified printer station to the specified display station and reports the new hard-copy assignment.
- **Printer station name** — Assigns the specified printer station to the display station issuing the command and reports the new hard-copy assignment. You cannot use this response type if you have accessed DNCS CI by using the XCI command.

Related Commands

- **Display Station** — Displays the characteristics and the current status of stations (paragraph 3.2.18).

3.2.22 Log Off Command

The Log Off command terminates a session with an application. This command is available only through VDT2 or 914A display stations, not through XCI.

Syntax

LOGOFF [[ID =]< terminal name>]

[[APPL =]< vpu.application>]]

[[APPL =]< synonym>]]

where:

- < terminal name > is the device name of a terminal.
- < vpu > is the name of the VPU providing the LU for the session.
- < application > is the (host) name of an application.
- < synonym > is a DNCS application synonym.

The equal sign is a required delimiter for the ID and APPL.

Examples

```
LOGOFF
LOGOFF ID = LP01
LOGOFF APPL = V1.ADAIMS
LOGOFF APPL = IMS
```

Results

The Log Off command terminates a session with an application program. The Log Off command results depend on the response type you enter, explained as follows:

- If you do not specify a response type, the Log Off command logs you off your current application. (If you have multiple sessions, it terminates the first active session in the order of the mode definitions for the station.)
- If you specify a terminal name, you terminate its current session.
- If you specify an application, you log yourself off the session with the application. This is useful when using the concurrent session capability.
- If you specify a terminal and an application, you log the specified terminal off of the session with the application. This is useful for multiple session control of printers.

Related Commands

- Log On — Establishes or returns to a session with an application (paragraph 3.2.23)

3.2.23 Log On Command

The Log On command establishes or resumes a session with an application on the SNA host computer. This command is available only through VDT2 and 914A display stations, not through XCI. The Log On command has two forms: short and long. The short form does not require delimiters around the user data; however, the user data cannot begin with ID = . The long form (using the keyword LOGON) has the ability to name the mode and user.

Syntax

Short form:

< synonym> [ID = < resource name>] [< user data>]

< vpu> .< application> [ID = < resource name>] [< user data>]

Long form:

LOGON [[ID =]< resource name>

[APPL =]< synonym> /< vpu> .< application>]

[MODE =]< log mode name>]

[USER =]< delimiter> < user data> < delimiter>]

where:

=	is a required delimiter, except as noted by [=].
< synonym>	is a DNCS application synonym.
< resource name>	is the name of a resource.
< user data>	is data for the application. Data may not have an embedded delimiter when delimiters are used. A maximum of 100 characters is allowed. The note can be extended to the second line.
< vpu>	is the name of the VPU providing the LU for the session.
< application>	is the host name of an application.
< delimiter>	is one of the characters ! @ # \$ % & * " ' : + / ? used to define user data.
< log mode name>	eight alphanumeric characters. The first character must be a letter. Embedded blanks are not allowed.

Examples

V1.ALEIMA

IMS ID = LP01

LOGON APPL = V1.ALEIMA

LOGON APPL = IMS

LOGON MODE = DCPUPA

LOGON USER = %CCUSER/PASSWORD RECONNECT%

Results

The Log On command attempts to establish a session with the indicated application. You can indicate the application by specifying the host application name and the VPU providing the LU for the session, or you can specify the DNCS synonym that stands for the VPU/application combination. If you specify a printer station, the Log On command establishes the session between the indicated application and that printer station. If you do not specify a printer station, the Log On command establishes the session with the station at which you issue the command.

The Log On command allows you to log on (yourself or other terminals) using response types that you supply. The main purpose of the LOGON command is to allow you to use a mode name that was not specified at system generation.

If you are already logged on to a session with the specified application through the specified VPU, you return to that session. If you specify a new VPU, you begin a new concurrent session with the same application.

When the application definition includes an ID requirement, you must provide user data with the command. Typically, this is a user ID, needed to log on to the host application. Consult your application administrator for details.

Related Commands

- Log Off — Terminates a session with an application (paragraph 3.2.22)

3.2.24 Restart Board Command

The Restart Board command stops and then reactivates a board, downloading LCD code into the board memory if required. This reinitializes the board, allowing recovery from some temporary problems.

Syntax

```
RESTART < board >
```

where:

< board > is the DNCS name of a physical board.

Examples

```
RESTART B01
```

```
RESTART B03 PSW = DNCS
```

Prerequisites

The board must not be in the STOP or BCKUP state. Also, it must be a physical, not a virtual, board.

This command requires the DNCS password, if assigned.

Results

First, the Restart Board command stops the specified board, all of its ports, and all circuits attached to those ports. This stops the flow of data to stations on the circuits but does not change the stations' states. Then, it downloads the board with LCD code if necessary and starts the board, ports, and circuits.

Related Commands

- Backup Board — Assigns all ports on the board to their backups (paragraph 3.2.7)
- Start Board — Activates a board (paragraph 3.2.31)
- Stop Board — Deactivates a board (paragraph 3.2.37)

3.2.25 Restart Circuit Command

The Restart Circuit command stops a circuit, its port, and its stations. Then, it reactivates them, reinitializing the circuit and port and allowing recovery from some temporary problems.

Syntax

```
RESTART < circuit >
```

where:

< circuit > is the name of a circuit.

Examples

```
RESTART C01
```

```
RESTART C04 PSW = DNCS
```

Prerequisites

The specified circuit must not be in the STOP state. Its port must not be in the STOP or BCKUP state.

This command requires the DNCS password, if assigned.

Results

The Restart Circuit command stops the specified circuit, its current port, and all its stations not in the STOP state. Then, it attempts to start the circuit, port, and stations. (Stations in the STOP state prior to command execution remain in the STOP state.)

Related Commands

- Assign Circuit — Assigns a circuit to a port (paragraph 3.2.2)
- Backup Circuit — Assigns a circuit to its backup port (paragraph 3.2.8)
- Start Circuit — Starts or activates a circuit (paragraph 3.2.32)
- Stop Circuit — Stops or deactivates a circuit (paragraph 3.2.38)

3.2.26 Restart Port Command

The Restart Port command stops a port, its circuit, and any stations on its circuit. Then, it attempts to reactivate them.

Syntax

```
RESTART < port >
```

where:

< port > is the name of a port.

Examples

```
RESTART P011
```

```
RESTART P031 PWS = DNCS
```

Prerequisites

The port must not be in the BCKUP or STOP state. Its circuit must not be in the STOP state.

This command requires the DNCS password, if assigned.

Results

First, the Restart Port command stops the specified port, the circuit attached to it, and any stations on the circuit (except for those in the STOP state). Then, the command reactivates the port, circuit, and stations. (Stations in the STOP state prior to command execution remain in the STOP state.) If you issue the command from a VDT2 display station on the circuit attached to the specified port, you also terminate the VDT2 Emulator.

Related Commands

- Assign Backup Port — Assigns a port to its backup (paragraph 3.2.1)
- Backup Port — Moves a circuit to its backup port (paragraph 3.2.9)
- Start Port — Activates a port (paragraph 3.2.33)
- Stop Port — Deactivates a port (paragraph 3.2.39)

3.2.27 Restart Station Command

The Restart Station command stops a specified station or a selected group of stations. Then, it reactivates the station(s), allowing recovery from some temporary problems.

Syntax

RESTART < station >

RESTART < circuit > [ALL/ERR/TMO/ADR = < stations >]

RESTART < port > [ALL/ERR/TMO/ADR = < stations >]

where:

< station > is the name of a station.

< circuit > is the name of a circuit.

< port > is the name of a port.

< stations > is a list of station IDs, separated by commas or hyphens.

Examples

RESTART VDT03

RESTART V914A1 PSW = DNCS

RESTART C02 ALL

RESTART C04 TMO

RESTART P031 ERR PWS = DNCS

Prerequisites

You cannot use this command to restart a station in the STOP state; you must use the Start Station command.

This command requires the DNCS password, if assigned.

Results

The Restart Station command stops the indicated station(s) and then reactivates them. Specifying a port is the same as specifying the circuit attached to it. The following command syntax determines which stations to restart:

- **Station name** — Specified station
- **Circuit (or port) name** — Circuit, port, and all stations on the indicated circuit except those in the STOP state
- **Circuit (or port) name and keyword ALL** — All stations on the indicated circuit except those in the STOP state
- **Circuit (or port) name and keyword ERR** — All stations in the error state on the indicated circuit
- **Circuit (or port) name and keyword TMO** — All stations in the TMOUT state on the indicated circuit
- **Circuit (or port) name and the keyword ADR followed by a list of station IDs** — Stations on the circuit whose station IDs are listed after ADR

Related Commands

- **Start Station** — Activates a station (paragraph 3.2.35)
- **Stop Station** — Deactivates a station (paragraph 3.2.41)
- **Display Station** — Displays characteristics and current status for a station (paragraph 3.2.18)

3.2.28 Restore Board Command

The Restore Board command restores all circuits on a board to their primary ports.

Syntax

```
RESTORE < board>
```

where:

< board> is the name of a physical board.

R is the abbreviation for RESTORE.

Examples

```
RESTORE B01
```

```
RESTORE B03 PSW = DNCS
```

Prerequisites

The board must be a physical board. At least one port on the board must be in the BCKUP state without a circuit attached. The backup ports for the circuits being restored must not be in the STOP state. You must manually move each modem cable for each restored circuit from its backup port to its primary.

This command requires the DNCS password, if assigned.

Results

The Restore Board command affects only those circuits with primary ports on the specified board. It modifies their port/circuit assignments, starts the primary ports, and stops the backups. This allows data on the circuits to pass through their primary ports instead of their backups.

Related Commands

- Backup Board — Assigns each circuit on a physical board to its backup port (paragraph 3.2.7)

3.2.29 Restore Circuit Command

The Restore Circuit command restores a circuit from its backup port to its primary port. (Restore Port performs the same function.)

Syntax

```
RESTORE < circuit>
```

where:

< circuit> is the name of a circuit.

R is the abbreviation for RESTORE.

Examples

```
RESTORE C01
```

```
RESTORE C04 PSW = DNCS
```

Prerequisites

The primary port must be in the BCKUP state without a circuit attached. The backup port must not be in the STOP state. You must manually move the modem cable for the circuit from its backup port to its primary port.

This command requires the DNCS password, if assigned.

Results

The Restore Circuit command returns a circuit to its primary port assignment. Then, it starts the primary port and stops the backup, allowing data on the circuit to flow through the primary port instead of the backup.

Related Commands

- Restore Port — Restores a circuit attached to a backup port to its primary port (paragraph 3.2.30)
- Restore Board — Restores all circuits on a physical board (paragraph 3.2.28)

3.2.30 Restore Port Command

The Restore Port command restores a circuit to its primary port. You can specify either the primary port or its backup. (Restore Circuit performs the same function as Restore Port.)

Syntax

```
RESTORE < port>
```

where:

< port> is the name of a port.

R is the abbreviation for RESTORE.

Examples

```
RESTORE P011
```

```
RESTORE P012
```

```
RESTORE P031 PSW = DNCS
```

Prerequisites

The primary port must be in the BCKUP state without a circuit attached. The backup port must not be in the STOP state. You must manually move the modem cable for the circuit from the backup port to the primary port.

This command requires the DNCS password, if assigned.

Results

The Restore Port command restores a circuit from its backup to its primary port. The command changes the port/circuit assignment, starts the primary port, and stops the backup. This allows data on the circuit to flow through the primary port instead of the backup.

Related Commands

- Assign Backup Port — Assigns a backup for the specified port (paragraph 3.2.1)
- Backup Port — Assigns the circuit on a port to its backup port (paragraph 3.2.9)

3.2.31 Start Board Command

The Start Board command activates a physical board, plus all its ports that have circuits attached, the circuits attached to those ports, and all stations on those circuits (except those in the STOP state).

Syntax

```
START < board>
```

where:

< board> is the name of a physical board.

S is the abbreviation for START.

Examples

```
START B01
```

```
S B03 PSW = DNCS
```

Prerequisites

The board must be in the STOP state. All circuits attached to its ports must use the same LCD. At least one port on the board must be physically connected and ready to transmit data.

This command requires the DNCS password, if assigned.

Results

The Start Board command activates the specified physical board, downloading it with LCD code if required. It activates all ports on the board that have circuits attached and also activates those circuits. If the circuits have stations not in the STOP state, the command also activates those stations.

The Start board command provides a combined display for the specified board and its ports. Figure 3-3 describes the board information, and Figure 3-7 describes the port information.

Related Commands

- Display Board — Displays the characteristics and the current status of a board (paragraph 3.2.11)
- Backup Board — Assigns all circuits on a board to backup ports (paragraph 3.2.7)
- Stop Board — Deactivates all circuits on a physical board (paragraph 3.2.37)

3.2.32 Start Circuit Command

The Start Circuit command activates a circuit, allowing its stations to access the network.

Syntax

```
START < circuit>
```

where:

< circuit> is the name of a circuit.

S is the abbreviation for START.

Examples

```
START C01
```

```
S C04 PSW = DNCS
```

Prerequisites

The circuit must be in the STOP state and attached to a port. The circuit specified must not be the SDLC circuit used for the link line to the host.

This command requires the DNCS password, if assigned.

Results

The Start Circuit command activates the specified circuit, placing it in the ALIVE state. It also activates any stations on the circuit that are not in the STOP state.

After it starts the circuit, the command provides a combined display showing the states of the circuit, its port, and its stations. Figure 3-4 describes the circuit information, Figure 3-7 describes the port information, and Figure 3-9 describes the station information.

Related Commands

- Stop Circuit — Deactivates a circuit (paragraph 3.2.38)
- Assign Circuit — Assigns a circuit to a port (paragraph 3.2.2)
- Display Circuit — Displays the characteristics and the current status of circuits (paragraph 3.2.12)

3.2.33 Start Port Command

The Start Port command activates a port, its circuit, and the stations on the circuit (except those in the STOP state).

Syntax

```
START < port >
```

where:

< port > is the name of a port.

S is the abbreviation for START.

Examples

```
START P011
```

```
START P012 PSW = DNCS
```

Prerequisites

The specified port must be in the STOP state, and it must have a circuit attached.

This command requires the DNCS password, if assigned.

Results

The Start Port command activates the specified port and its circuit, placing them in the ALIVE state. It also starts all stations on the circuit (except those in the STOP state), placing them in the ACT state. This allows those stations to access the network.

The Start Port command produces a display showing the characteristics and new states of the port, circuit, and stations (or PUs). Figure 3-4 describes the circuit information, Figure 3-7 describes the port information, Figure 3-8 describes the PU information, and Figure 3-9 describes the station information.

Related Commands

- **Display Port** — Displays the characteristics and the current state of a port (paragraph 3.2.15)
- **Stop Port** — Deactivates a port (paragraph 3.2.39)
- **Assign Backup Port** — Assigns the circuit on a port to its backup port (paragraph 3.2.1)
- **Backup Port** — Assigns the circuit attached to a port to its backup (paragraph 3.2.9)

3.2.34 Start PSN PU Command

The Start Packet-switching Network (PSN) PU command initiates a call from the PU specified to an SNA host via a PSN.

Syntax

```
START < PU name>
```

where:

< PU name> is the name of a PU.

S is the abbreviation for START.

Examples

```
START CDAA4R
```

```
S CDAANS PSW = DNCS
```

Prerequisites

The PU must be in the DISCN state. Your system must be configured to allow communication to an SNA host over a PSN. Refer to the *DNOS DNCS System Generation Reference Manual* for details. You must have a subscription to a PSN, and the SNA host must be configured to answer incoming calls.

Results

A call is issued to the SNA host. The PU state either becomes ACT or remains DISCN if the call is not accepted.

Related Commands

- Stop PSN PU — Disconnects the call over the PSN between the specified PU and an SNA host (paragraph 3.2.40).

3.2.35 Start Station Command

The Start Station command activates a station, allowing it to take part in the network. Variations of the Start Circuit and Start Port commands can start selected groups of stations. Once started, stations remain active until deactivated.

Syntax

START < station >

START < circuit > [ALL/ADR = < station IDs >]

START < port > [ALL/ADR = < station IDs >]

where:

< station > is the name of the station being started.

< circuit > is the name of a circuit.

< port > is the name of a port.

< station IDs > is a list of station IDs, separated by commas or hyphens. Commas indicate specific stations, and hyphens indicate a sequential series of stations.

S is the abbreviation for START.

Examples

START VDT01

START V914A1 PSW = DNCS

S PTR02

START C02 ADR = 01 – 07,09

S P031 ALL

Prerequisites

The stations being started must be in the STOP state. The circuit specified (if any) must not be the SDLC circuit used for the link line to the host.

This command requires the DNCS password, if assigned.

Results

Issuing a Start Station command makes the indicated station or stations available for use by changing the state from STOP to ACT. The command entered indicates which stations are activated. (Specifying a port is equivalent to specifying its circuit.) The following command syntax determines which stations are activated:

- Station name — Starts the specified station
- Circuit (or port) name — Circuit (or port), and all stations in the ERR or TMO state on the circuit indicated
- Circuit (or port) name and the keyword ALL — All stations in the ERR or TMO state on the circuit indicated
- Circuit (or port) name and the keyword ADR followed by a list of station IDs — All listed stations that are in the ERR or TMO state

The Start Station command produces a display showing the states of the stations started. Figure 3-4 describes the circuit information, Figure 3-7 describes the port information, and Figure 3-9 describes the station information.

Related Commands

- Start Circuit — Starts all stations on a circuit, a list of stations on a circuit, or all stations on a circuit that have a status of ERR or TMO (paragraph 3.2.32)
- Display Station — Displays the characteristics and the current state of a specified station (paragraph 3.2.18)

3.2.36 Start X.25 Statistics Command

The Start X.25 statistics command initializes values of counters that record X.25 statistics. The DNCS network SCI command IST X25 is identical to this command.

Syntax

ACT X25 STATS

ACTSTS is synonymous with ACT STATS.

Examples

ACT X25 STATS

ACTSTS X25

Related Commands

- Display X.25 Statistics — Displays X.25 statistics for either all VCs or a specified VC at a given subscription address. (paragraph 3.2.19)

3.2.37 Stop Board Command

The Stop Board command deactivates a physical board, its ports, and the circuits attached to its ports, placing them all in the STOP state.

Syntax

```
STOP < board >
```

where:

< board > is the DNCS name of a physical board.

P is the abbreviation for STOP.

Examples

```
STOP B01
```

```
P B02 PSW = DNCS
```

Results

The Stop Board command deactivates the board specified in the < board > field, resetting the board. The command also stops all ports on the board that are configured for DNCS and any circuits attached to those ports.

In addition, the Stop Board command produces a combined display for the specified board and its ports. Figure 3-3 describes the board information, and Figure 3-7 describes the port information.

Related Commands

- Start Board — Activates a board (paragraph 3.2.31)
- Display Board — Displays the characteristics and the current status of boards (paragraph 3.2.11)

3.2.38 Stop Circuit Command

The Stop Circuit command deactivates a circuit, interrupting the exchange of data between its stations and their applications.

Syntax

```
STOP < circuit >
```

where:

< circuit > is the name of a circuit.

P is the abbreviation for STOP.

Examples

```
STOP C01
```

```
P C04 PSW = DNCS
```

Prerequisites

The specified circuit must not already be in the STOP state.

This command requires the DNCS password, if assigned.

Results

The Stop Circuit command deactivates the specified circuit. This stops the flow of data to stations on the circuit but does not change their states.

In addition, the Stop Circuit command produces a combined display for the circuit, its port, and its stations. Figure 3-4 describes the circuit information, Figure 3-7 describes the port information, and Figure 3-9 describes the station information.

Related Commands

- Display Circuit — Displays the characteristics and the current state of a circuit (paragraph 3.2.12)
- Start Circuit — Activates a circuit (paragraph 3.2.32)

3.2.39 Stop Port Command

The Stop Port command deactivates a port and the circuit connected to the port.

Syntax

```
STOP < port >
```

where:

< port > is the name of a port.

P is the abbreviation for STOP.

Examples

```
STOP P011
```

```
P P031 PSW = DNCS
```

Prerequisites

The specified port must not already be in the STOP state.

This command requires the DNCS password, if assigned.

Results

The Stop Port command deactivates the specified port, plus the circuit attached to it. It does not affect the states of stations on the circuit.

In addition, the Stop Port command produces a display for the specified port, its circuit, and the stations on the circuit (or the PU for SDLC circuits). Figure 3-4 describes the circuit information, Figure 3-7 describes the port information, Figure 3-8 describes the PU information, and Figure 3-9 describes the station information.

Related Commands

- Display Port — Displays the characteristics and the current states of ports (paragraph 3.2.15)
- Start Port — Activates a port (paragraph 3.2.33)

3.2.40 Stop PSN PU Command

The Stop Packet-switching Network (PSN) PU command disconnects a call over a PSN between the specified PU and its SNA host.

Syntax

STOP < PU name >

where:

< PU name > is the name of a PU.

P is the abbreviation for STOP.

Examples

STOP CDAANR

P CDAANS PSW = DNCS

Prerequisites

A call to the SNA host must have been previously established.

Results

The call is disconnected and the PU state becomes DISCN.

Related Commands

- Start PSN PU — Initiates a call over a PSN between the specified PU and its SNA host (paragraph 3.2.40)

3.2.41 Stop Station Command

The Stop Station command deactivates a station or a selected group of stations. A stopped station remains inactive until it is started.

Syntax

STOP < station >

STOP < circuit > [ALL/ERR/TMO/ADR = < station IDs >]

STOP < port > [ALL/ERR/TMO/ADR = < station IDs >]

where:

< station > is the name of a station.

< circuit > is the name of a circuit.

< port > is the name of a port.

< station IDs > is a list of station IDs, separated by commas or hyphens.

P is the abbreviation for STOP.

Examples

STOP VDT02

STOP PTR02 PSW = DNCS

S C04 ALL

STOP P021 ADR = 01 – 07,09

Prerequisites

This command requires the DNCS password, if assigned.

Results

The Stop Station command deactivates a station. The station remains inactive until it is started. Starting or restarting a port or circuit does not affect a stopped station. However, you can include a keyword with a Stop Circuit or Stop Port command to select the stations you want to stop. (Stop Circuit and Stop Port have the same function.) The exact result depends on the command you enter, as follows:

- Station name — Stops the specified station
- Circuit (or port) name — Stops the indicated circuit and port, but not the stations on the circuit
- Circuit (or port) name and the keyword ALL — Stops all stations on the indicated circuit
- Circuit (or port) name and the keyword ERR — Stops all stations in the ERROR state on the indicated circuit
- Circuit (or port) name and the keyword TMO — Stops all stations in the TMO state on the indicated circuit
- Circuit (or port) name and the keyword ADR followed by a list of station IDs — Stops the stations with the specified station IDs on the indicated circuit

In addition, the Stop Station command produces a display showing the stopped stations. If you specify a station, the display includes any LUs assigned to the station. If you specify a circuit or port, the display includes the circuit and port as well as the stations on the circuit. Figure 3-4 describes the circuit information, Figure 3-6 describes the LU information, Figure 3-7 describes the port information, and Figure 3-9 describes the station information.

Related Commands

- Display Station — Displays the characteristics and the current state of stations (paragraph 3.2.18)
- Start Station — Activates a station (paragraph 3.2.35)

DNCS Operations

4.1 INTRODUCTION

This section illustrates how commands, presented in preceding sections, are used to manage SNA and network resources.

4.2 ACTIVATING DNCS

DNCS executes as a job under DNOS and supports all DNCS nucleus activity on the system. Perform the following steps to activate DNCS:

1. From SCI, enter the Execute DNCS (XDNCS) command as follows:

```
[ ]XDNCS
  DNCS BATCH JOB LISTING: <pathname> (@DNCS.S$DNCS.STRLST)
```

DNCS BATCH JOB LISTING

Specifies where you want DNCS to write the listing file for the batch job that activates DNCS. It is a good idea to keep this file for diagnostic purposes in case you have trouble activating DNCS.

2. Before proceeding with network operations, verify that DNCS has become active by using one of the following methods:
 - a. Examine the batch listing file that XDNCS creates. The pathname of this file is < DNCS> .S\$DNCS.STRLST, where < DNCS> is the DNCS system volume.
 - b. Use the List Jobs (LJ) command to check the state of the DNCS Job, as follows:
 - (1) Log on to the DNCS job under user ID SYSTEM.
 - (2) Allow two or three minutes for DNCS to assume its idle state.
 - (3) Issue the LJ command as follows:

```
[ ]LJ
```

```
LIST JOBS
```

```
      JOB NAME OR ID: DNCS
      TASK INFORMATION: YES
      LISTING ACCESS NAME:
```

- (4) Check the state of the DNCS job. When the LJ command shows the job named DNCS in state two, DNCS is active. Compare the LJ display with Figure 4-1. Activation is complete when DNCSPDCT assumes state > 42.

3. Any DNCS packages can now be started.

4.3 TERMINATING DNCS

To terminate DNCS, you cannot be logged on to the DNCS job, and you must have control of the operator interface; use the following procedure:

1. Enter the Show Job Status (SJS) command and accept the defaults. If SJS reports that your job name is DNCS, log off and log on again to another job.
2. Enter the Execute Operator Interface (XOI) command as follows:

[]XOI

This identifies you as the system operator and your station as the system console. When the screen is blank, press the Command key, and the SCI prompt ([]) appears.

USER-ID	JOB-NAME	ID	PRI	STATE	JCASIZE	CURRENT	MAXIMUM					
SYSTEM00	DNCS	0004	5	2	3648	1742	2772					
TASK	ID	RUN-ID	STN	PRI	R-PRI	STATE	WP	PC	FLAG1	FLAG2	CPU	SECS
FILEMGR	05	02		0	0	24	90CC	C05C	D128	0000		3.7
DNCSSCT	0B	0B		2	163	06	4E3A	3F86	1028	0000		2.4
DNCSTSR	0C	19		2	164	06	7EEA	0588	1020	0000		0.5
DNCSPC	0D	17		2	152	06	2FE0	0588	1020	0000		0.1
DNCSDC	0E	15		2	157	06	5342	0588	1020	0000		0.4
DNCSPDCT	03	13		2	170	42	5BF2	3224	1028	0000		1.8
DNCSCI	10	11		2	150	06	8F7C	0588	1020	0000		0.0
DNCSCLOK	0F	0E		2	150	05	1F60	1E64	3000	0000		0.5

Figure 4-1. Job Status Display for DNCS

3. Enter TDNCS as follows, replying YES to confirm that you wish to terminate DNCS:

[] TDNCS

```

TERMINATE DNCS
ARE YOU SURE?      YES

```

The TDNCS command allows all tasks running under the DNCS job to perform their end-actions before it kills the DNCS job.

4. Return the operator interface by entering the Quit Operator Interface (QOI) command as follows:

[] QOI

4.4 DISPLAYING RESOURCE INFORMATION

SCI and DNCS CI provide a variety of displays that show the configurations and states of the resources controlled by DNCS. You can issue DNCS CI display commands from any DNOS station with access to SCI, from a VDT2 Emulator, or from a 914A station. Table 4-1 lists the DNCS CI displays available.

Table 4-1. DNCS CI Display Commands

To display data for ...	Enter the command ...
Specific board	DISPLAY < board >
All boards	DISPLAY BOARDS
Active boards	DISPLAY ACT BOARDS
Inactive boards	DISPLAY INACT BOARDS
Specific port	DISPLAY < port >
All ports	DISPLAY PORTS
Active ports	DISPLAY ACT PORTS
Inactive ports	DISPLAY INACT PORTS
Specific circuit	DISPLAY < circuit >
All circuits	DISPLAY CIRCUITS
Active circuits	DISPLAY ACT CIRCUITS
Inactive circuits	DISPLAY INACT CIRCUITS
Specific LU	DISPLAY NODE < lu >
Specific PU	DISPLAY < pu >
All PUs	DISPLAY PU
Active PUs	DISPLAY ACT PU
Inactive PUs	DISPLAY INACT PU

Table 4-1. DNCS CI Display Commands (Continued)

To display data for ...	Enter the command ...
Specific station	DISPLAY < station >
All stations	DISPLAY TERMS
Active stations	DISPLAY ACT TERMS
Inactive stations	DISPLAY INACT TERMS
Specific route	DISPLAY SITES SITE = < routename >
Specific site	DISPLAY SITES SITE = < sitename >
All sites and routes	DISPLAY SITES
Specific X.25 virtual circuit	DISPLAY X25NA < "subscriber address" > VC = < vc >
All X.25 virtual circuits	DISPLAY X25NA < "subscriber address" >
Printer assigned to specific station	HARDCOPY VDU = < station >

Table 4-2 lists the DNCS network SCI displays that show resource information. For details on the displays, refer to Section 3.

Table 4-2. DNCS Network SCI Display Commands

To display data for ...	Enter the command ...
DNCS log file	DNCSLOG
Board status	SBOARD
Port status	SPORT
Circuit status	SCIR
DNCS task or FCCC memory	SPGM
X.25 routes and sites	SSITE
X.25 virtual circuit	SX25

4.5 STARTING RESOURCES

DNCS CI and SCI commands allow you to start resources at any time while DNCS is active. Starting a station changes its state to ACT and makes it available for network activity. (If DNCS cannot start the station, it places the station in the ERR or TMO state.) Starting a board, port, or circuit changes its state from STOP to ALIVE.

DNCS allows you to start stations selectively in the ERROR or TMOOUT states or to list the stations you want to start. Table 4-3 lists the DNCS CI Start commands.

Table 4-3. DNCS CI Start Commands

To start ...	Enter the command ...
Specific board	START < boardname>
Specific port	START < port>
Specific circuit	START < circuit>
Specific station	START < station>
Specific PSN PU	START < PU name>
All stations on circuit	START < circuit> ALL
Time-out stations on circuit	START < circuit> TMO
Error stations on circuit	START < circuit> ERR
Specific stations on circuit	START < circuit> ADR < stations>

The DNCS network SCI command that activates a circuit, a port, or a board is as follows:

```
[ ]MRES
MODIFY RESOURCE STATUS
    RESOURCE NAME: < resourcename>
    NEW STATUS: START
    DNCS PASSWORD: < password>
```

4.6 STOPPING RESOURCES

DNCS CI commands allow you to stop resources at any time while DNCS is active. Stopping a station changes its status temporarily to INACT (inactive) and then to STOP, effectively removing it from DNCS operations. Stopping a board, port, or circuit changes its status temporarily to PSTOP (stop pending) and then to STOP.

DNCS allows you to stop stations selectively in the ERROR or TMOOUT states or to list stations you want to stop. Table 4-4 lists all DNCS CI Stop commands.

Table 4-4. DNCS CI Stop Commands

To stop ...	Enter the command ...
Specific board	STOP < boardname>
Specific port	STOP < port>
Specific circuit	STOP < circuit>
Specific station	STOP < station>
Specific PSN PU	STOP < PU name>
All stations on circuit	STOP < circuit> ALL
Time-out stations on circuit	STOP < circuit> TMO
Error stations on circuit	STOP < circuit> ERR
Specific stations on circuit	STOP < circuit> ADR < stations>

The DNCS network SCI command to stop a circuit, a port, or a board selectively, is as follows:

```
[ ]MRES
MODIFY RESOURCE STATUS
    RESOURCE NAME: < resourcename>
    NEW STATUS: STOP
    DNCS PASSWORD: < password>
```

4.7 RESTARTING RESOURCES

DNCS CI commands allow you to restart resources at any time while DNCS is active. Restarting a resource is equivalent to stopping it and then starting it except that the transition state for boards, ports, and circuits is RSTRT instead of PSTOP.

DNCS allows you to restart stations selectively in the ERROR or TMOUT states or to list the stations you want to restart. Table 4-5 lists the DNCS CI Restart commands.

Table 4-5. DNCS CI Restart Commands

To restart ...	Enter the command ...
Specific board	RESTART < boardname>
Specific port	RESTART < port>
Specific circuit	RESTART < circuit>
Specific station	RESTART < station>
All stations on circuit	RESTART < circuit> ALL
Time-out stations on circuit	RESTART < circuit> TMO
Error stations on circuit	RESTART < circuit> ERR
Specific stations on circuit	RESTART < circuit> ADR < stations>

The DNCS network SCI command to restart a resource is as follows:

```
[ ]MRES
MODIFY RESOURCE STATUS
      RESOURCE NAME: <resourcename>
      NEW STATUS:    RESTART
      DNCS PASSWORD: <password>
```

4.8 REASSIGNING CIRCUITS TO PORTS

Each circuit must be assigned to a port in order for it to receive data. DNCS generation makes the initial port/circuit assignments, but you can change them while DNCS is active. To do so, perform the following steps:

1. If you are reassigning the synchronous data link control (SDLC) link line to the IBM host, skip this step. Otherwise, issue an Assign Flash command to notify the operators of stations on the circuit that their stations are about to be stopped, as in the following example:

```
ASSIGN FLASH = "Down in 5 minutes: Please log off application."
```

2. Stop the port. This also stops the circuit and all of its stations.

- The following DNCS CI command stops port P013:

```
STOP P013
```

- The following DNCS network SCI command stops port P013:

```
[ ]MRES
MODIFY RESOURCE STATUS
      RESOURCE NAME:    P013
      NEW STATUS:      STOP
      DNCS PASSWORD:   DNCS
```

3. Issue a Display Port command to make sure that the new port is in the STOP state and does not already have a circuit assigned.

- The following DNCS CI command displays P014 information:

```
DISPLAY P014
```

- The following DNCS network SCI command shows port status:

```
[ ]SPORT
```

4. Physically detach the modem cable for the circuit (line) from its I/O port on the 990 chassis and attach it to the new port.

5. Assign the circuit to its new port using the Assign Circuit command.

- The following DNCS CI command assigns a circuit to its new port:

```
ASSIGN C01 TO P014
```

- The following DNCS network SCI command assigns a circuit to its new port:

```
[ ] ACIR
```

6. Start the new port by using the Start Port command. This also starts the circuit and all stations on the circuit.

- The following DNCS CI command starts port P014:

```
START P014
```

- The following DNCS network SCI command starts P014:

```
[ ] MRES
MODIFY RESOURCE STATUS
RESOURCE NAME: P014
NEW STATUS: START
DNCS PASSWORD: DNCS
```

7. Complete the operation by using the Assign Flash command to send another message to each user affected, as in the following example:

```
ASSIGN FLASH "Circuit Alive: OK to log back on"
```

4.9 BACKING UP PORTS

DNCS generation allows you to assign a backup for each port to take over the circuit if the port fails. DNCS CI and DNCS network commands can change this initial assignment, switch the circuit to the backup port, and restore the circuit to the original (primary) port. In all cases, the primary port and its backup must provide the same protocol for the circuit.

The Backup Circuit and Backup Port commands have identical results. The only difference is that for Backup Circuit you specify the circuit being moved and for Backup Port you specify the primary port being backed up. The Backup board command switches all circuits attached to the ports on the specified board to their backups. The Assign Circuit command can also change the port assignment for a circuit. However, Assign Circuit does not cause the DNCS CI Display commands to report that the port has been backed up.

Use the following procedure to back up ports:

1. To assign a backup to a port without using XDGU, enter the Assign Port command.
 - The following DNCS CI command assigns port P021 as the backup for port P022:


```
ASSIGN P022 TO P021
```
 - The following DNCS network SCI command assigns a backup port:


```
[ ]APORT
```
2. To change the backup for a port, you must first stop the port and then assign a new backup.

- The following DNCS CI commands change the backup for port P022 from P021 to P023:

```
STOP P022
ASSIGN P022 TO P023
```

- The following DNCS network SCI commands will change the backup for a port:

```
[ ]MRES
MODIFY RESOURCE STATUS
      RESOURCE NAME: <resourcename>
      NEW STATUS: STOP
      DNCS PASSWORD: <password>
[ ]APORT
```

NOTE

You can assign the same backup to several ports. However, since only one circuit can be assigned to the backup, the backup cannot take over for more than one port at a time.

3. To switch a circuit from its primary port to its backup, issue the Backup Circuit command and then physically move the modem cable for the circuit from the primary port to the backup.
 - The following DNCS CI command switches circuit C01 from its primary port P022 to its backup P023:

```
BACKUP C01
```

You can now physically move the modem cable for the circuit.

- The following DNCS network SCI command switches circuit C01 from its primary port to its backup port:

```
[ ]MRES
MODIFY RESOURCE STATUS
      RESOURCE NAME:  C01
      NEW STATUS:     BACKUP
      DNCS PASSWORD:  DNCS
```

You can now physically move the modem cable for the circuit.

4.10 RESTORING PORTS AND CIRCUITS

DNCS generation allows you to assign for each port a backup to take over the circuit when the port fails. When you switch the circuit to its backup port, DNCS places the primary port in the BCKUP state. When you restore to the primary port, the port must still be in the BCKUP state and must not have a circuit attached. To restore the circuit from its backup port to its primary, you must issue a Restore Circuit command and then physically move the modem cable for the circuit from the backup to the primary port.

The Restore Circuit and Restore Port commands have identical results. The only difference is that for Restore Circuit you specify the circuit being moved and for Restore Port you specify the primary port that was backed up. The Restore Board command restores all the circuits attached to the ports on the specified board to their primaries. The Assign Circuit command can also change the port assignment for a circuit. However, DNCS CI Display commands do not report that the port is no longer backed up when the Assign Circuit command changes port assignment. Use the following procedure to restore ports and circuits:

1. The following DNCS CI command restores circuit C01 from its backup to its primary port:

```
RESTORE C01
```

You can now physically move the modem cable for the circuit.

2. The following DNCS network SCI command restores circuit C01 from its backup to its primary port:

```
[ ]MRES
MODIFY RESOURCE STATUS
      RESOURCE NAME:  C01
      NEW STATUS:     RESTORE
      DNCS PASSWORD:  DNCS
```

You can now physically move the modem cable for the circuit.

4.11 DOWNLOADING TERMINALS

DNCS downloads a 914A terminal automatically when DNCS is activated or when the terminal, its circuit, its port, or its board is started. This means you do not have to use the Download command unless you have found a problem that requires a new download. In such cases, use the Download command as follows, specifying the < terminal ID> of the terminal you want to download:

```
DWNLD ID = < terminal ID>
```

You cannot use this command if you have gained access to DNCS CI through the XCI command.

4.12 ASSOCIATING PRINTERS WITH TERMINALS

The 914A terminal and VDT2 Display Station Emulator have Print keys that can send screen images to designated devices or files. DNCS generation allows you to associate an output device or printer station Emulator with the Print key of each station. You can display and change the Print key assignment by using the DNCS CI Hard-Copy commands.

To display the Print key assignment for a given station, use a Hard-Copy command that specifies the < station ID> for the station, as follows:

```
HARDCOPY VDU < station ID>
```

You can omit the VDU < station ID> when you want to know the Print key assignment for the station where you issue the command, as follows:

```
HARDCOPY
```

You cannot omit the station ID if you have accessed DNCS CI through XCI.

To change the Print key assignment for a given station, use a Hard-Copy command that specifies both the terminal ID for the station and the printer station ID for the new output destination as follows:

```
HARDCOPY VDU < station ID> < printer station ID>
```

4.13 BROADCASTING MESSAGES

DNCS CI provides the Assign Flash command to allow you to send messages to a specific station or to all display stations. To send a message to a specific station, use the DNCS CI Assign Flash command as follows:

```
ASSIGN FLASH = < "message"> [< station ID>]
```

To send a message to all stations, omit the station ID. The message can consist of up to 58 characters enclosed in either single or double quotes. A message in single quotes can contain double quotes and vice versa. DNCS handles your message in the same way as its error messages, displaying it at the bottom of the screen after the operator uses a function key. The message remains there until the operator acknowledges it by pressing the Return key on most TI terminals or the Enter key on the 914A.

4.14 CONTROLLING ACCESS TO DNCS COMMANDS

You can implement password security for most DNCS commands, restricting their use to those who know the DNCS password. (You cannot secure the Display commands or the Hard-Copy, Log On, Log Off, or Download commands.) Until you issue an Assign New Password command, any user at a VDT controlled by the VDT2 Emulator or a 914A terminal configured for DNCS can issue any of the DNCS CI commands. Once you assign a password, these users can continue to access remote applications and to issue Display commands but they will not be able to start and stop resources or to back up and restore ports. The format of the Assign New Password command is as follows:

```
ASSIGN NEWPSW = < new password> [PSW = < old password> ]
```

where:

< new password> is the password you wish to assign. The DNCS password can be either a string of up to eight letters and numerals beginning with a letter (like a DNOS name) or a string of up to eight characters enclosed in single or double quotes.

< old password> is the password you wish to change. When you make the initial password assignment, your system does not have a password, and you should omit the PSW = < old password> part of the command.

Once you have implemented password security for DNCS, anyone wishing to issue a secured command must include the following syntax at the end of the command:

```
PSW = < password>
```

Remember that the password assignment remains in effect only while DNCS is active.

To disable password security, you can issue the Cancel Password command, as follows:

```
CANCEL PSW = < password>
```

You can implement security for DNCS network SCI commands by controlling the privilege code assigned to user IDs. See paragraph 1.2.3.

DNCS SVQ Utility

5.1 GENERAL INFORMATION

The DNCS Service Queue (SVQ) utility is a work scheduling utility that allows you to execute DNOS/DNCS tasks at a user-defined date and time. The type of work that you can schedule includes three DNOS SCI command requests (PF, XB, and XBJ) and DNCS host application requests. If you have the DNOS DNCS X.25 Remote File Transfer (RFT) package, you can also schedule and execute these requests on a remote computer.

SVQ allows you to set up standard SCI utilities (such as batch streams, batch jobs, and print files) to execute on a time-delayed basis to level demand for system resources. In unattended batch jobs, you can include any SCI command that does not require user response once it is initiated.

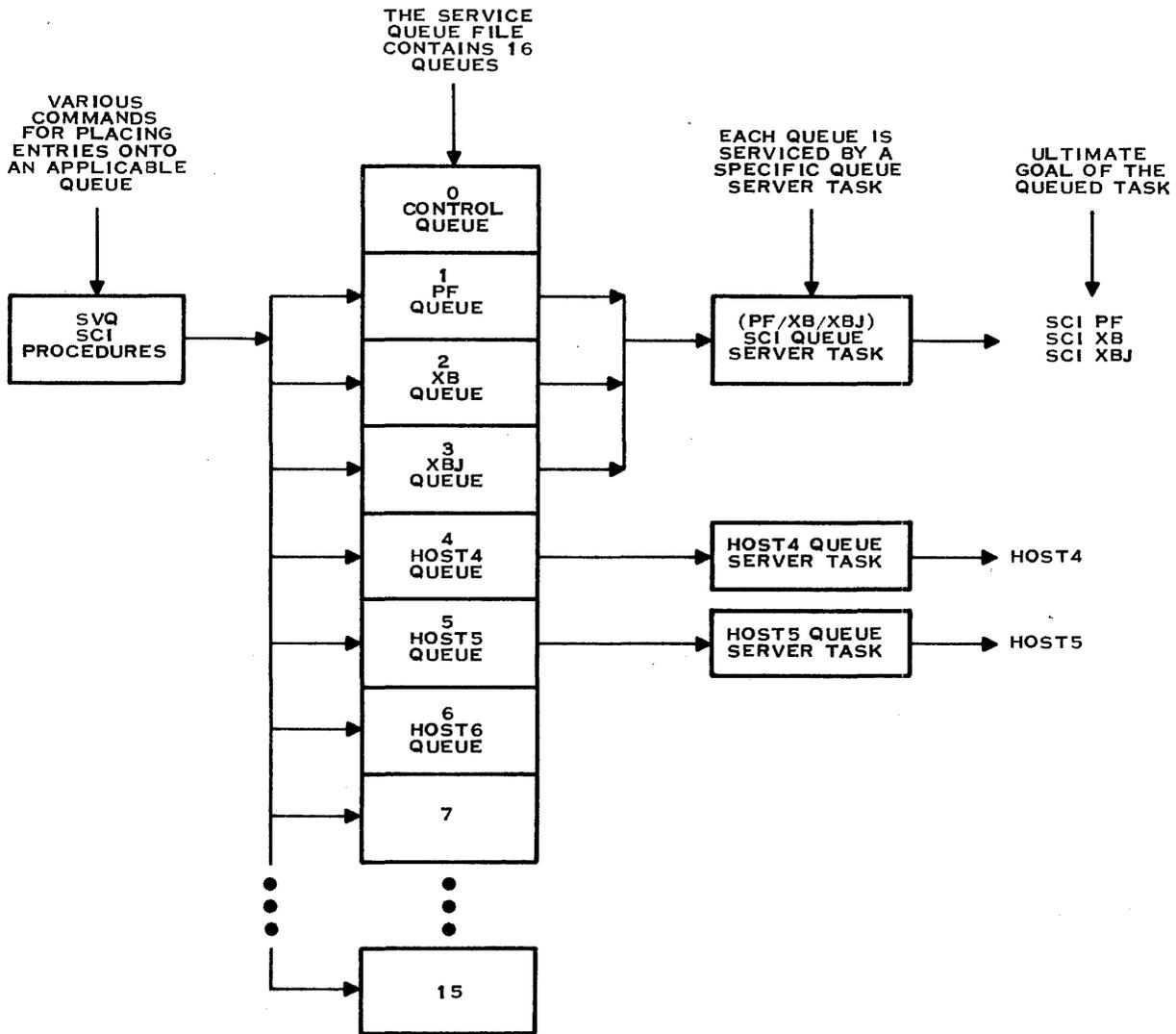
Use of SVQ to access DNCS host applications requires that a DNCS Interprocess Communication (CIPC) circuit with resource type SVQ (LU type 1) be configured during DNCS generation. SVQ then can be used to process noninteractive transactions with a host application at a user-defined date and time. Since a host session is automatically established for each queue defined, the user does not need to log on to the host application. This allows multiple users to concurrently share the same LU in a familiar SCI environment.

SVQ contains three major components: SCI commands, the service queue file, and queue server tasks. Each component is divided into specialized functions to accommodate a variety of options. For a typical request, the user enters an SCI command. SVQ then takes control, places the request in the queue, and frees the terminal for foreground or background activity. Finally, SVQ releases the job for execution at its designated date/time and initiates the task.

SCI command functions provide for initialization, system maintenance, and user interface. Separate SCI SVQ commands perform print file, batch stream, batch job, and host applications. Customized SCI procedures can be written for each specific host application. (Appendix C contains some example procedures.) Alternatively, users can select any available application with the procedure provided.

The service queue file is a single disk file divided into 16 queues. For placing entries, each SVQ function is allocated an exclusive queue, which is a subqueue of the service queue file. Each queue can be separately activated, deactivated, and maintained by the system operator according to the particular installation.

The queue server tasks are specialized and handle one or more queues. Whereas the same task services standard SCI print and batch functions, each applicable host function is serviced by its own task. Since each host queue task is in session with a particular application, SVQ permits concurrent transaction processing. Figure 5-1 is a generalized diagram of the SVQ job flow.



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Figure 5-1. SVQ Job Flow

5.2 SVQ SCI COMMAND INTRODUCTION

Table 5-1 lists and describes the SVQ commands. These commands appear on the SVQ command menu (displayed when you enter /SVQ). These command procedures are described in detail beginning in paragraph 5.4; they are presented here to familiarize you with them before you prepare the system for SVQ usage. The SVQ SCI commands fall into three categories, as follows:

- Initialization commands — Used to prepare SVQ for execution when DNCS is first installed or later when system characteristics require modifications.
- System maintenance commands — Used to start/stop SVQ options, activate/deactivate queue access, and display queue status. Start queue functions must be performed after each initial program load (IPL); otherwise, these commands are used only as required.
- User interface commands — Initiate queue service job processing; intended for routine usage.

Table 5-1. SVQ SCI Commands

Command	Description
Initialization command:	
CFQ	Create Service Queue File
System maintenance commands:	
HOSTQST	Start Specific Host Queue Service
HOSTSTOP	Stop Specific Host Queue Service
SCIQST	Start SCI Queue Service
SCIQSTOP	Stop SCI Queue Service
QMGR	Service Queue Manager
User interface commands:	
QHOST	Place Request on Specified Host Queue
QPF	Place Print Request on PF Queue
QXB	Place Batch Request on XB Queue
QXBJ	Place Batch Request on XBJ Queue

5.3 PREPARING THE SYSTEM FOR SVQ USAGE

When the DNCS nucleus is installed on a system, SVQ is automatically installed as an integral part of DNCS. SVQ and DNCS SCI commands reside on the same procedure library, which is chosen at installation time. SVQ and DNCS tasks share the same program file, <DNCS>.S\$DNCS.PGMTASK, where <DNCS> is defined at installation time.

Before you can use any of the user interface commands, you must perform the following steps:

1. Create the service queue file by using the CFQ command.
2. Initialize and activate the required queues by using the QMGR command.
3. Start the queue server tasks by using the SCIQST and HOSTQST commands.

Subsequent paragraphs provide detailed instructions on using these commands.

5.4 CFQ (CREATE SERVICE QUEUE FILE) COMMAND

The CFQ command creates and initializes the service queue file. In the event of system complications or the need to change the capacity of the file, you can also use CFQ to recreate the file, as follows.

Prompts

```
CREATE SERVICE QUEUE FILE
MINIMUM NUMBER QUEUE RECORDS:    (17)
```

If the service queue file already exists when you enter the CFQ command, an additional prompt appears, as follows, giving you the opportunity to delete and recreate the file.

```
SERVICE QUEUE FILE ALREADY EXISTS
DELETE AND RECREATE?:            YES/NO    (NO)
```

Upon successful completion, CFQ automatically executes the queue manager task for automatic initialization. The queue manager then enters the MODQ function, awaiting your selection. Refer to the QMGR command description for prompt details and instructions.

Prompt Details

MINIMUM NUMBER QUEUE RECORDS

This number is a lower bound. CFQ will increase it to accommodate overhead. Each record stores information for one SVQ request. Therefore, the minimum number specified should be the maximum number of requests expected to be awaiting service in the queue at any given time.

DELETE AND RECREATE?

Respond YES to delete and recreate the file. A NO response terminates CFQ without altering the file.

Example

In the following example, the CFQ command creates a new service queue file with a minimum number of 20 records. The QMGR command, which is executed by CFQ, automatically prompts you when you press the Return key after the completion message appears. Refer to the QMGR description for an explanation and example.

```
[ ] CFQ
CREATE SERVICE QUEUE FILE
MINIMUM NUMBER QUEUE RECORDS:    20

SERVICE QUEUE FILE CREATION COMPLETED
```

Messages

SERVICE QUEUE FILE CREATION COMPLETED

SERVICE QUEUE FILE HAS NOT BEEN CREATED

CFQ automatically issues the CFREL command; if CFREL fails, this message appears. Retry the CFQ command.

Notes

Once created, the service queue file resides at pathname < DNCS> .S\$DNCS.SVQ.SCIQUE, where < DNCS> is defined at installation time.

Be careful when you delete an existing file, since any unserviced items in the queue will be lost.

CFQ assigns user IDs SCIQST and SVQHOST, which are essential to executing the SCI and host queue server tasks. CFQ also assigns logical name SCIQUE and global LUNO > EF to the service queue file as a requirement for SVQ operation. Once CFQ has been executed and the service queue exists, DNCS command XDNCS automatically handles the logical name and global LUNO assignments as part of its required DNCS/SVQ initialization; accordingly, SVQ commands must be preceded by XDNCS after each IPL.

5.5 QMGR (SERVICE QUEUE MANAGER) COMMAND

Service Queue Manager (QMGR) is a multipurpose, interactive utility designed to assist the system operator with initialization or modification of configurable queue parameters and to provide display functions useful for examining queue contents and deleting queue entries. With QMGR you have the capability to perform the following functions:

- **STATQ:** Display status of service queue.
- **SHOWQ:** Show queue contents and delete single entries.
- **MODQ:** Modify queue to activate or deactivate access.
- **CLRQ:** Clear/delete all entries in any queue.
- **INITQ:** Initialize or reinitialize the service queue file.

When you enter the QMGR command, the service queue manager utility automatically performs STATQ, which displays the primary queue status screen. Depending on the function that you select (by pressing keys defined at the bottom of each screen), QMGR displays a new screen, changes its key definitions to allow the choice of additional functions, or prompts you for additional input.

Each screen display has its own set of key definitions and prompts that allow you to modify some aspect of the service queue file reported by STATQ. Therefore, after any modification is performed, QMGR automatically issues STATQ, which displays the primary screen reflecting the changes you make.

5.5.1 STATQ Function of QMGR

The STATQ display screen summarizes the service queue file status and is extremely valuable for monitoring SVQ activity and troubleshooting errors. You can determine how many requests are in the service queue awaiting execution and how many more requests the service queue can hold (as indicated by the REQUESTS WAITING and REQUEST SPACES AVAILABLE counts, respectively). Errors in the user procedures occur when the service queue is full, as indicated when the REQUEST SPACES AVAILABLE count equals zero. The enqueue count (ENQ CNT) column tells how many entries are entered on each queue, and the entire column is totaled in the REQUESTS WAITING field. The ACTIVE/ACCEPT status reports whether the queue is operational and is accepting new inputs.

Queue zero occupies the first record on the service queue file, is used by SVQ to control queue input/output, and is not user-accessible. All remaining records are initially available as queue space to accept entries for queues 1 to 15, and they form the QUEUE CAPACITY count. The service queue is flexible; it allows any of the 15 queues to use its next available space with no percentage restriction on the amount of space that a specific queue can occupy. (Theoretically, the entire service queue could be occupied by QXB jobs waiting for evening execution.) As soon as a task in the queue is finished, its space is released for use by any other queue task, and the REQUEST SPACES AVAILABLE count is increased by one. Figure 5-2 shows a typical QMGR primary screen display.

```

STATUS OF SERVICE QUEUE FILE
QUEUE CAPACITY = 32 REQUESTS
REQUESTS WAITING = 12    REQUEST SPACES AVAILABLE = 20

  QUEUE    ACTIVE    ACCEPT    ENQ CNT
    0      YES      YES      0
    1      YES      YES      2
    2      YES      YES      0
    3      YES      YES      5
    4      YES      YES      3
    5      YES      YES      2
    6      NO       NO       0
    7      NO       NO       0
    8      NO       NO       0
    9      NO       NO       0
   10      NO       NO       0
   11      NO       NO       0
   12      NO       NO       0
   13      NO       NO       0
   14      NO       NO       0
   15      NO       NO       0

F1:SHOWQ  F2:MODQ  F3:CLRQ  F4:INITQ  CMD:SCI

```

Figure 5-2. STATQ Primary QMGR Display Screen

STATQ Display Function Keys

QMGR menu components are in the form KEY:FUNCTION. To select a menu function, press its related key. In the following function descriptions, each includes the prompt which appears at the bottom of the screen when you press its key.

NOTE

Brief descriptions of each function introduced by menus on each QMGR display screen are given with related prompts (where applicable) throughout the QMGR description. Primary functions SHOWQ and MODQ require expanded definition and are described in more detail in subsequent paragraphs.

F1:SHOWQ

The SHOWQ function displays the contents of a specified queue and allows you to delete selected entries by their unique record number. You can use SHOWQ to display what unprocessed requests are on the queue and their date and time for execution. Each SHOWQ display entry is identified by user ID, job name, and input data. The SHOWQ function prompts you for the number of the queue that you want displayed, as follows:

**AT PROMPT, TYPE QUEUE NUMBER TO BE DISPLAYED:
PRESS <RETURN> TO ENTER—PRESS <CMD> TO CANCEL**

This prompt is used in the example in Figure 5-3 and indicates the location of all prompts described for QMGR sessions.

```

STATUS OF SERVICE QUEUE FILE
QUEUE CAPACITY = 32 REQUESTS
REQUESTS WAITING = 12    REQUEST SPACES AVAILABLE = 20

  QUEUE    ACTIVE    ACCEPT    ENQ CNT
    0      YES      YES      0
    1      YES      YES      2
    2      YES      YES      0
    3      YES      YES      5
    4      YES      YES      3
    5      YES      YES      2
    6      NO       NO       0
    7      NO       NO       0
    8      NO       NO       0
    9      NO       NO       0
   10      NO       NO       0
   11      NO       NO       0
   12      NO       NO       0
   13      NO       NO       0
   14      NO       NO       0
   15      NO       NO       0

```

**AT PROMPT, TYPE QUEUE NUMBER TO BE DISPLAYED:
PRESS <RETURN> TO ENTER—PRESS <CMD> TO CANCEL**

Figure 5-3. STATQ Display Screen After Pressing F1

F2:MODQ

The MODQ function allows you to modify the active and accept status of each selected queue up to the maximum of 15. These settings lock or unlock SVQ access to each of the queues. As a rule, any queue you want to use should have both active and accept status set to YES, indicating that it is unlocked. Any unused queues should remain set to NO. The MODQ function changes the function key definitions, as follows:

F1:MULTIPLE QUEUES F2:SINGLE QUEUE CMD:CANCEL

F3:CLRQ

The CLRQ function cancels all requests in a single queue. CLRQ voids any requests in the queue and frees the affected queue space for other SVQ activity. CLRQ does not change the active or accept status conditions. After a successful CLRQ, the count of the available request spaces in the primary display increases by the number of requests that were in the cleared queue. No other queues are affected. The CLRQ function prompts you for the number of the queue that you want cleared, as follows:

**AT PROMPT, TYPE QUEUE NUMBER TO BE CLEARED:
PRESS < RETURN > TO ENTER—PRESS < CMD > TO CANCEL**

F4:INITQ

The INITQ function initializes an existing service queue file. INITQ is primarily an error recovery process, refreshing all queues and setting the active and accept status conditions to NO; therefore, you must always perform the MODQ function. After every INITQ, QMGR automatically enters the MODQ function. The INITQ function prompts you for confirmation, as follows:

**ERASE ENTRIES, RESET CONTROL DATA—ARE YOU SURE?
PRESS < RETURN > TO INITQ—PRESS < CMD > TO CANCEL**

CMD:SCI

The SCI function terminates QMGR and returns terminal control to SCI.

5.5.2 SHOWQ Function of QMGR

The SHOWQ function lists all entries in the single queue that you select, as shown in Figure 5-4. SHOWQ presents the number of the queue which you are viewing in its screen header. All entries seen in SHOWQ displays are placed via commands QPF, QXB, QXBJ, or QHOST. SHOWQ display parameters USER ID and JOB NAME are derived from the terminal issuing the corresponding SCI command. The DATE, TIME, and INPUT DATA parameters are supplied by the user via SCI command prompts. RECORD numbers are assigned by SVQ when the request is entered, and they are the first available record or most recently released record at time of entry. Each SHOWQ screen can display a maximum of 18 records, and QMGR restricts page count to 8; thus, the maximum displayable number of queue entries is 144.

LISTING OF SERVICE QUEUE FILE ENTRIES FOR QUEUE: 4					
RECORD	DATE	TIME	USER ID	JOB NAME	-----INPUT DATA-----
28	830818	2300	TDD011	SVQMGR	NNOTVC AA.MASTER.DATA3(+0)
31	830818	0	SYSTEM	CONSOLE	NYOLMDL AA.LLIB
23	830818	1700	JDR023	DNCS	NY1DS03.USERLIB.MSGCMD

F1:FORWARD F2:BACK F3:DELETE ENTRY CMD:STATQ

Figure 5-4. SHOWQ Secondary QMGR Display Screen

For QPF, QXB, and QXBJ entries, the SHOWQ input data field contains file pathname, input access name, and synonym table pathname, respectively. In QHOST entries, the file pathname or command response is preceded by three SVQ control characters. The first two characters are yes (Y) or no (N) responses to delete file command and list input in trace file, respectively. Character three is yes (1) or no (0), representing whether a file name was specified for input.

SHOWQ Display Function Keys**F1:FORWARD**

The FORWARD function displays the contents of the next page if it exists; otherwise, the current page is redisplayed.

F2:BACK

The BACK function displays the contents of the previous page if it exists; otherwise, the current page is redisplayed.

F3:DELETE ENTRY

The DELETE ENTRY function allows you to delete any single entry in the queue that you are examining. Delete is provided as an option in SHOWQ because QMGR deletes entries by their corresponding record number seen on this display. Select the entry you wish to delete and supply its record number at the prompt:

AT PROMPT, TYPE RECORD NUMBER TO BE DELETED:
PRESS < RETURN > TO ENTER—PRESS < CMD > TO CANCEL

The DELETE ENTRY prompts are used in the SHOWQ example in Figure 5-5.

LISTING OF SERVICE QUEUE FILE ENTRIES FOR QUEUE: 4					
RECORD	DATE	TIME	USER ID	JOB NAME	-----INPUT DATA-----
28	830818	2300	TDD011	SVQMGR	NNOTVC AA.MASTER.DATA3(+0)
31	830818	0	SYSTEM	CONSOLE	NYOLMDL AA.LLIB
23	830818	1700	JDR023	DNCS	NY1DS03.MYLIB.MSGCMD

AT PROMPT, TYPE RECORD NUMBER TO BE DELETED:
PRESS < RETURN > TO ENTER--PRESS < CMD > TO CANCEL

Figure 5-5. SHOWQ Display Screen After Pressing F3

CMD:STATQ

The STATQ function terminates SHOWQ and returns QMGR to its primary display screen.

5.5.3 MODQ Function of QMGR

As shown in Figure 5-6, the MODQ function displays the ACTIVE and the ACCEPT status of each queue. This function allows you to modify these status conditions that lock or unlock SVQ access to each of the queues.

```

STATUS OF SERVICE QUEUE FILE
QUEUE CAPACITY = 20 REQUESTS
REQUESTS WAITING = 0    REQUEST SPACES AVAILABLE = 20

  QUEUE    ACTIVE    ACCEPT    ENQ CNT
    0      YES      YES       0
    1      NO       NO        0
    2      NO       NO        0
    3      NO       NO        0
    4      NO       NO        0
    5      NO       NO        0
    6      NO       NO        0
    7      NO       NO        0
    8      NO       NO        0
    9      NO       NO        0
   10      NO       NO        0
   11      NO       NO        0
   12      NO       NO        0
   13      NO       NO        0
   14      NO       NO        0
   15      NO       NO        0

F1: MULTIPLE QUEUES  F2: SINGLE QUEUE  CMD: CANCEL

```

Figure 5-6. MODQ Secondary QMGR Display Screen After INITQ

To use the SVQ SCI capability, queues 1 through 3 must have the ACTIVE and ACCEPT status set to YES and must be reserved for Print File (PF), Execute Batch (XB), and Execute Batch Job (XBJ), respectively. Queues 4 through 15 are reserved for host applications. Any queues needed for host applications (as determined by the system configuration) must have the ACTIVE and ACCEPT status set to YES.

ACTIVE state YES allows SVQ to place (enqueue) items or remove (dequeue) items, and ACCEPT state YES allows SVQ to enqueue items. If *any* enqueue or dequeue activity is to be allowed for a selected queue, you must set ACTIVE state YES. When *both* enqueue and dequeue are to be allowed, you must set ACCEPT state YES. Table 5-2 shows the four possible states of any given queue.

Table 5-2. Queue Status Interpretation

State	Active	Accept	Queue Status
1	NO	NO	Rejects user requests and rejects queue server activity
2	NO	YES	Rejects user requests and rejects queue server activity
3	YES	NO	Rejects user requests and allows queue server activity
4	YES	YES	Accepts user requests and allows queue server activity

QUEUE STATE 1

This is the normal queue state after CFQ and INITQ; it prevents any queue server activity.

QUEUE STATE 2

This state has the same effect as state 1. Its ACCEPT state YES condition is meaningless; therefore, you should not use this state.

QUEUE STATE 3

This state locks out the users but permits queue server task activity. You can use it to turn off the queue to user inputs while still allowing all requests currently in the queue to be serviced.

QUEUE STATE 4

This is the normal state of the queues you selected for activity (according to your particular system installation) after MODQ executes.

When performing MODQ, the ACTIVE and ACCEPT states must be tagged with YES or NO for all queues selected in order for MODQ to set status and terminate normally. MODQ terminates itself after you have tagged the final ACCEPT state (which is the accept state of the highest or only queue which you have selected). If you have tagged all but the final ACCEPT, you can press the <CMD> key and cause MODQ to terminate and disregard all tags, leaving STATQ in its current state. Once you tag the final ACCEPT, MODQ automatically sets all states as tagged and returns to QMGR's primary STATQ screen so that you can verify your changes. Queue zero is automatically set to YES for restricted SVQ access and is not user-modifiable.

MODQ Display Function Keys**F1: MULTIPLE QUEUES**

Enter the number of the last (highest-numbered) queue you want to change in response to the prompt:

ENTER HIGHEST QUEUE USED—SET ALL OTHERS NO:
PRESS <RETURN> TO ENTER—PRESS <CMD> TO CANCEL

All queues beyond the highest selected are automatically reset to NO regardless of any preexistent YES states.

After you press the Return Key, a new set of prompts appears and the cursor automatically positions itself at queue 1 ACTIVE. As you tag each queue state, the cursor moves left to right and top to bottom (ACTIVE to ACCEPT, queue 1 to the highest selected). Wherever the cursor is positioned, you must press either the Enter key (NO) or the Return key (YES), even if the tag appears as you want it. To correct any mistakes, the up and down arrows allow you to backspace the cursor to modify previous tags. As soon as the arrow selected line is retagged, MODQ returns the cursor to where you originally pressed the arrow. The MULTIPLE QUEUES prompts are:

AT CURSOR PRESS <ENTER> FOR NO, <RETURN> FOR YES
 PRESS UP OR DOWN ARROW TO MOVE CURSOR
 == PRESS <CMD> TO EXIT AND IGNORE ALL CHANGES ==

These prompts are used in the example in Figure 5-7

```

STATUS OF SERVICE QUEUE FILE
QUEUE CAPACITY = 20 REQUESTS
REQUESTS WAITING = 0   REQUEST SPACES AVAILABLE = 20

  QUEUE   ACTIVE   ACCEPT   ENQ CNT
    0     YES     YES      0
    1     YES     YES      0
    2     YES     YES      0
    3     YES     YES      0
    4     YES     YES      0
    5     YES     NO       0
    6     NO      NO       0
    7     NO      NO       0
    8     NO      NO       0
    9     NO      NO       0
   10     NO      NO       0
   11     NO      NO       0
   12     NO      NO       0
   13     NO      NO       0
   14     NO      NO       0
   15     NO      NO       0

AT CURSOR PRESS <ENTER> FOR NO, <RETURN> FOR YES
PRESS UP OR DOWN ARROW TO MOVE CURSOR
== PRESS <CMD> TO EXIT AND IGNORE ALL CHANGES ==

```

Figure 5-7. MODQ Secondary QMGR Display Screen After Multiple Queues

F2:SINGLE QUEUE

Enter the number of the queue you want to change in response to the prompt:

ENTER QUEUE TO MODIFY—ALL OTHERS UNCHANGED:
PRESS < RETURN> TO ENTER—PRESS < CMD> TO CANCEL

After you press return, the cursor automatically positions itself at the queue you selected, and a new set of prompts appears, as follows:

AT CURSOR PRESS < ENTER> FOR NO, < RETURN> FOR YES
= = PRESS < CMD> TO EXIT AND IGNORE ALL CHANGES = =

CMD:CANCEL

The CANCEL function restores STATQ screen without changes.

5.5.4 QMGR Error Conditions

QMGR produces error and warning messages for invalid function keys, empty queues, queue numbers out of range, records not found, queues busy, invalid file headers, dequeue subroutine errors, and SVC I/O errors. Most messages are self explanatory and have obvious solutions; however, if invalid header, dequeue, or SVC error messages occur, refer to the following descriptions.

Invalid Service Queue File Header

As a routine safety check, QMGR always validates the service queue by examining the first record on the file before proceeding. If the header does not validate, the following message appears:

QMGR WARNING: INVALID SERVICE QUEUE FILE HEADER
PRESS < RET> TO INITQ OR < CMD> TO TERMINATE QMGR

Press the Command key to terminate, and then refer to QMGR and troubleshooting instructions (paragraph 5.5.5).

Dequeue Error Conditions

SVQ's dequeue subroutine is used by QMGR to delete entries. The following message indicates a fatal error in the service queue. If fatal errors are recurrent and you cannot find the cause, contact your customer representative.

SVQ DEQUEUE SUBROUTINE ERROR NUMBER: 11
RETRY: IF RECURRENT CONSIDER CFQ, INITQ, OR CLRQ
= = PRESS < CMD> TO EXIT = =

SVC I/O Error Conditions

QMGR uses standard DNOS supervisor calls (SVCs) to process input/output (I/O) events on the service queue file. Most file errors generated by SVCs occur during the four basic functions: open, read, write, and close. If QMGR detects an SVC error, the internal message code appears as follows:

```

QMGR TERMINATED WITH SCIQUE I/O ERROR: SVC 1
RETRY: IF RECURRENT CONSIDER CFQ, INITQ, OR CLRQ
      = = PRESS <CMD> TO EXIT = =

```

This example shows error 1, which translates from internal error >0001 to SVC error 0118, meaning that a LUNO is not assigned. It was resolved by reassigning global LUNO > EF (as described in the following paragraphs). Refer to the *DNOS Messages and Codes Reference Manual*, Table 13-3, for cross references.

5.5.5 QMGR Troubleshooting

If error conditions occur and routine investigation cannot resolve them, probably the overhead data in the queue has been destroyed and requires reinitialization using INITQ. Before reinitializing (which deletes all requests from the service queue), use the SCI commands List Logical Name (LLN) and Show I/O Status (SIS) to ensure that global logical name SCIQUE and global LUNO > EF are assigned to the service queue file [volume].S\$DNCS.SVQ.SCIQUE. If these assignments do not exist, manually correct the condition with SCI commands Assign Logical Name (ALN) and Assign Global LUNO (AGL); then reenter the command that failed. Should you plan to contact your customer representative, use SCI command List Logical Record (LLR) to list the entire SVQ file and save the listing before proceeding with reinitialization.

To reinitialize, examine the STATQ display to determine how many requests are waiting for service. If no requests are waiting, select INITQ. When requests are waiting, use SHOWQ to determine their origin so that you can reenter them. If SHOWQ cannot work properly due to faulty overhead data, the SCI command Show File (SF) is helpful in examining the service queue file. This is a relative record file not intended for routine examination, but you should be able to identify entries from visible data. Remember that all data seen with SF may not be waiting requests (SVQ does not erase finished requests). After INITQ successfully completes, all data for any requests that were on the queue has been erased, and only control data is present. You must then perform the MODQ function that QMGR automatically enters following INITQ. The screen as it appears after performing INITQ is presented in Figure 5-6.

5.6 SCIQST (START SCI (PF, XB, XBJ) QUEUE SERVICE) COMMAND

The SCIQST command starts the SCI queue server task. The QPF, QXB, and QXBJ commands cannot be serviced until the SCIQST command executes.

Prompts

```
START SCI(PF, XB, XBJ) QUEUE SERVICE
DO YOU WANT A TRACE FILE?: YES/NO      (YES)
```

Prompt Details

DO YOU WANT A TRACE FILE?

SVQ provides an optional trace file that records SCI queue server activity. For troubleshooting, you should use this option if adequate space exists on the volume containing the \$\$DNCS directory. Respond YES to activate the trace file option.

Example

In the following example, the SCIQST command exercises the trace file option and is followed by a message indicating successful completion.

```
[ ] SCIQST
START SCI(PF, XB, XBJ) QUEUE SERVICE
DO YOU WANT A TRACE FILE? YES

SCI QUEUE SERVICE STARTED WITH TRACE OPTION
```

Messages

SCI QUEUE SERVICE STARTED WITH TRACE OPTION

SCI QUEUE SERVICE STARTED WITHOUT TRACE OPTION

SCIQST ALREADY ACTIVE, NOT RESTARTED

DNCS SERVICE INACTIVE—XDNCs COMMAND MUST PRECEDE QUEUE SERVICE START

WARNING: PREVIOUS SCITRACE FILE NOT FOUND

WARNING: ARCHIVES FILE OVERFLOW—PARTIAL SAVE ONLY

This message occurs when the trace file is larger than the archive file. Since the trace file is expandable and the archive file is not expandable, overflow can occur. If your SCI queue operations generate large trace files, you should increase the size of the archive file by editing the SCIQST command procedure. SCIQST issues the CFREL command with initial allocation of 864 records when creating the archive file. To increase allocation, edit the two applicable occurrences of CFREL within SCIQST.

SCI QUEUE SERVICE START FAILED

This message indicates that the XBJ command failed within SCIQST. Verify that the user ID SCIQST exists by using the List User IDs (LUI) command. Examine files SCITRACE and SCIQSTL in the SVQ directory defined in the following notes.

Notes

At your option, the SCIQST command may be placed in the system initialization file .S\$ISBTCH, since the queue server tasks must be restarted after each IPL. If this option is chosen, the DNCS command XDNCS must precede SCIQST in the initialization file.

When you specify the trace file option in SCIQST, the latest trace file is automatically appended to a relative record, non-expandable file as an archive. This archive file is automatically backed up when it reaches its nonexpandable limit. The SVQ directory containing these files resides under the pathname < DNCS> .S\$DNCS.SVQ, where < DNCS> is defined at installation time. File names SCITRACE, ARCHIVES, and OLDARCHV in the SVQ directory are the current trace file, most recent backup, and oldest backup, respectively.

5.7 HOSTQST (START SPECIFIC DNCS/SNA HOST QUEUE SERVICE) COMMAND

The HOSTQST command starts the host queue server task. The QHOST command cannot be serviced until the HOSTQST command is executed.

Prompts**START SPECIFIC DNCS/SNA HOST QUEUE SERVICE**

```

        QUEUE NUMBER (4..15):  Integer
        DNCS LOGON:             alphanumeric
        PASSWORD:               [alphanumeric]
        SESSION LOGON FILE PATHNAME: [filename@]
        DNCS HOST CONNECTED MESSAGE: alphanumeric
        DNCS POLL ADDRESS (TYPE SVQ): integer    (103)

```

Prompt Details**QUEUE NUMBER**

Enter the number of the queue (4 through 13) that serves the host application.

DNCS LOGON

Enter the text string used to log on to the requested host application.

PASSWORD

Enter the text string of the password if it is required to log on to the requested host application.

SESSION LOGON FILE PATHNAME

Enter the pathname of the file containing any application commands that are to be sent to the host at log-on. This option allows you to automatically send a predefined set of instructions that are identical for every session.

DNCS HOST CONNECTED MESSAGE

Enter the text string response expected from the host to indicate successful log-on.

DNCS POLL ADDRESS(TYPE SVQ)

Enter the poll address assigned to the resource of type SVQ during the DNCS system generation.

Example

In the following example, the HOSTQST command starts host queue 4 and is followed by a message indicating successful completion.

```
[ ] HOSTQST
START SPECIFIC DNCS/SNA HOST QUEUE SERVICE
      QUEUE NUMBER (4. .15): 4
      DNCS LOGON: IMS
      PASSWORD:
      SESSION LOGON FILE PATHNAME:
      DNCS HOST CONNECTED MESSAGE: TERMINAL
                                   CONNECTED
      DNCS POLL ADDRESS (TYPE SVQ): 103

START SUCCESSFUL FOR HOST4 QUEUE SERVICE TASK
```

Messages

START SUCCESSFUL FOR HOST# QUEUE SERVICE TASK

HOSTQST ALREADY ACTIVE, NOT RESTARTED

DNCS SERVICE INACTIVE—XDNCS COMMAND MUST PRECEDE QUEUE SERVICE START

WARNING: PREVIOUS HOST# TRACE FILE NOT FOUND

WARNING: ARCHIV# FILE OVERFLOW—PARTIAL SAVE ONLY

This message occurs when the host trace file is larger than the archive file. Since the host trace file is expandable and the archive file is not expandable, overflow can occur. If your QHOST operations generate large trace files, you should increase the size of the archive file by editing the HOSTQST command procedure. HOSTQST issues the CFREL command with initial allocation of 1000 records when creating the archive file. To increase allocation edit the two applicable occurrences of CFREL within HOSTQST.

HOST# QUEUE SERVICE START FAILED

This message indicates that the XBJ command failed within HOSTQST. Verify that the user ID SVQHOST exists by using the List User IDs (LUI) command. Examine files HSTLST# and SVQHST# in the SVQ directory defined in the following notes.

Notes

The symbol # used throughout the HOSTQST description represents the selected queue number.

You can select any available queue in the range of 4 through 15 to execute your valid host applications. Theoretically, you might alternate executing Time Share Option (TSO) and Information Management System (IMS) on the same queue by simply executing HOSTQST with appropriate TSO parameters and later executing a HOSTSTOP command followed by HOSTQST with the appropriate IMS parameters. HOSTQST customizes the queue server task for your application. Alternatively, if you wish to execute TSO and IMS concurrently, you must configure your DNCS system generation with two resources of type SVQ on unique poll addresses; in this case, you execute HOSTQST twice, defining TSO and IMS parameters on separate queue numbers.

At your option, you can place the HOSTQST command in the system initialization file .S\$ISBTCH, since the queue server tasks must be restarted after each IPL. In this case, the DNCS command XDNC\$ must precede HOSTQST in the initialization file.

HOSTQST automatically generates a new trace file for each host queue server task when you execute it; however, the latest trace file is automatically appended to an archive file. This archive file increases in size and is automatically backed up when it reaches its nonexpandable limit. The SVQ directory containing these files resides under the pathname < DNCS > .S\$DNCS.SVQ, where < DNCS > is defined at installation time. File names HOSTR#, ARCHIV#, and OLDARC# in the SVQ directory are the current trace file, most recent backup, and oldest backup, respectively.

The session log-on file is similar to the DNOS initialization file .S\$ISBTCH since it performs routine operations that the operator would otherwise have to do. You must separate each command by the /* delimiter as defined for the QHOST command (paragraph 5.8). The same command restrictions of the QHOST command apply to the HOSTQST command. If your host application loses its session, SVQ does not resend this file. SVQ sends this file only once.

5.8 QHOST (PLACE REQUEST ON SPECIFIED HOST QUEUE) COMMAND

The QHOST command places a request on a specified host queue for time-delayed action or for immediate action apart from the activating terminal (to allow concurrent processing). QHOST accepts host commands in two forms—either a single command entered in response to the SCI prompt or multiple commands within a file whose pathname is entered in response to the SCI prompt. Submitting commands on a file pathname enables QHOST to submit a group of noninteractive inquiry/display type commands in a way much like DNOS batch streams; that is, each host command is issued sequentially in the order in which it appears in the file.

Prompts

PLACE REQUEST ON SPECIFIED HOST QUEUE		
QUEUE NUMBER (4..15):	integer	(4)
FILE PATHNAME OR COMMAND:	< alphanumeric/pathname@ >	
FILE PATHNAME SPECIFIED?:	YES/NO	(YES)
LIST INPUT IN TRACE FILE?:	YES/NO	(NO)
TRANSMISSION DATE (YYMMDD):	integer	(0)
TRANSMISSION TIME (HHMM):	integer	(0)
DELETE COMMAND FILE?:	YES/NO	(NO)

Prompt Details**QUEUE NUMBER (4..15)**

Enter the number of the queue (from 4 through 15) that serves the host application you wish to use.

FILE PATHNAME OR COMMAND

Enter a valid host command or a DNOS file pathname containing valid host command images.

FILE PATHNAME SPECIFIED?

Enter YES if you entered a file pathname in response to the previous prompt; otherwise, enter NO.

LIST INPUT TRACE FILE

Enter YES to list a copy of the data supplied in response to the FILE PATHNAME OR COMMAND prompt on the trace file.

TRANSMISSION DATE (YYMMDD)

Enter a zero for immediate activation or enter an integer to specify a date for a delayed host session.

TRANSMISSION TIME (HHMM)

Enter a zero for immediate activation or enter an integer to specify a time for a delayed host session. The time specified is based on the 24-hour clock.

DELETE COMMAND FILE?

Enter YES if you want SVQ to delete the file entered at the FILE PATHNAME OR COMMAND prompt after your request is finished.

Example

In the following example, the QHOST command enters the IMS command Date/Time (DT) through host queue 4 with no time delay. The successful entry message is shown followed by a copy of the corresponding trace file, which also includes the log-on sequence produced by HOSTQST.

```
[ ] QHOST
PLACE REQUEST ON SPECIFIED HOST QUEUE
      QUEUE NUMBER (4. .15): 4
      FILE PATHNAME OR COMMAND: DT
      FILE PATHNAME SPECIFIED?: NO
      LIST INPUT IN TRACE FILE?: YES
      TRANSMISSION DATE (YYMMDD): 0
      TRANSMISSION TIME (HHMM): 0
      DELETE COMMAND FILE?: NO
```

HOST REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

The following < DNCS> .S\$DNCS.SVQ.HOSTR4 trace file is displayed using the SF command:

```
HOST REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE
```

```
**** 82185:1300          TRANSACTION SENT FOLLOWS:
! LOGOFF
DNCS0923 E STSVQ1 CURRENTLY SELECTED SESSION IS NOT LOGGED ON
```

```
**** 82185:1300          TRANSACTION SENT FOLLOWS:
! IMS
DNCS0002 W STSVQ1 : LDAANR09 ATTEMPTING SESSION WITH V1.IMS
```

```
DFS2002 13:00:10 TERMINAL CONNECTED
```

```
**** 82185:1349 USER      JOBNAME    TRANSACTION SENT FOLLOWS:
DT
```

```
DT
```

```
SDA01
```

```
**DATE.07-04-82..82185..TIME.13-49-10..01-49-10.PM**
```

In the following example, the QHOST command enters IMS commands Date/Time (DT), Tape Volume Catalog (TVC), and Load Module Directory Listing (LMDL) via the DNOS pathname .IMSCMDS. A copy of the file .IMSCMDS is shown followed by a copy of the corresponding trace file. The last line in the trace file is produced by entering the HOSTSTOP command.

```
[ ] QHOST
PLACE REQUEST ON SPECIFIED HOST QUEUE
      QUEUE NUMBER (4. .15): 4
FILE PATHNAME OR COMMAND: .IMSCMDS
FILE PATHNAME SPECIFIED?: YES
LIST INPUT IN TRACE FILE?: NO
TRANSMISSION DATE (YYMMDD): 0
TRANSMISSION TIME (HHMM): 0
DELETE COMMAND FILE?: NO
```

HOST REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

The following file with pathname .IMSCMDS was created to be used in this example for the Input of multiple commands:

```
DT
/*
TVC AA.MASTER.DATA3(+0)
/*
LMDL AA.LLIB
```

The following < DNCS> .S\$DNCS.SVQ.HOSTR4 trace file is displayed using the SF command:

```
**** 82231:1352 TDD011 TERRY SECURE TRANSACTION SENT
DT
**DATE.08-19-82..82231..TIME.13-51-56..01-51-56.PM**
**** 82231:1352 TDD011 TERRY SECURE TRANSACTION SENT
TVC AA.MASTER.DATA3(+0)
VSN=054603 TYPE=SL EXPDT=05-11-85 STATUS=NORMAL STORAGE
OWNER=STIEFEL DIVSN=014 CC=0872 CHARGE=3390014002
CRDAT=06-17-82 CRTIM=19:47:31 CRDRV=45E
VOL 01 OF 01 DEN=6250 (9-TRK) DSN=AA.MASTER.DATA3.G0037V00
**** 82231:1353 TDD011 TERRY SECURE TRANSACTION SENT
LMDL AA.LLIB
MODULE ALIAS ATTR SZE HEX DEC EP ADDR LOAD DTE HR
D2008267 NO 02E2 00C30 003120 0000 03-18-76 08
D2200331 NO 02E2 08B00 035584 0000 04-28-80 16
D2200346 NO 02E2 087D8 034776 0000 04-16-82 14
D2200396 NO 02E2 087B0 034736 0000 12-12-79 14
D2200401 NO 02E2 082F8 033528 0000 11-19-81 10
**** DNCS9902 I SVQHST 82231:1356 67 00 NORMAL TERMINATION
```

Messages

HOST REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

QUEUE INACTIVE—START HOST QUEUE SERVICE THEN REENTER REQUEST
Use the HOSTQST command to start queue service.

WARNING:FILE PATHNAME DOES NOT EXIST

SERVICE QUEUE HOST# REQUEST FAILED

First, verify by entering the QMGR command that the service queue file has request space available and that the associated queue has both active and accept status YES. Next, retry the command; occasionally the service queue is busy at the time of your request. Finally, under certain rare conditions, overhead data on the service queue is destroyed, requiring reinitialization. Refer to the QMGR command description (paragraph 5.5.5) for troubleshooting information.

Notes

All responses from the host normally seen on a video screen are written to the host trace file under the pathname < DNCS> .\$\$DNCS.SVQ.HOSTR#, where < DNCS> is defined at installation time and # is the applicable queue number.

As indicated in the file pathname input example, multiple host transactions are separated by the delimiter /* located in columns 1 and 2. Host commands can be 48 characters long whether they are entered in response to the prompt or located in a DNOS file. If you answer YES to the prompt LIST INPUT IN TRACE FILE? when using file input, each command is listed individually when it is entered on the host; a copy of the file is not literally reproduced.

The LU that QHOST uses is fully dedicated to SVQ; only the queue server task can use it. However, multiple users have access to the queue server task through the QHOST command. When all of the pooled LUs in your DNCS network are busy, QHOST allows you to enter routine inquiries for rapid response without having to disturb other users. To view the response simply enter your inquiry using QHOST with date/time zero and execute the Show File (SF) command on the applicable host trace file.

5.9 QPF (PLACE PRINT REQUEST ON PF QUEUE) COMMAND

The QPF command places print requests on the print file queue for time-delayed processing or immediate processing to free the originating terminal for concurrent activity.

Prompts

PLACE PRINT REQUEST ON PF QUEUE

FILE PATHNAME:	filename@	(*)
ANSI FORMAT?:	YES/NO	(NO)
LISTING DEVICE OR CLASS:	alphanumeric@	(LP01)
DELETE AFTER PRINTING?:	[YES/NO]	(NO)
NUMBER OF LINES/PAGE:	[integer]	(62)
FORM:	[alphanumeric]	(STANDARD)
NUMBER OF COPIES:	range(1,255)	(1)
BANNER SHEET?:	YES/NO	(NO)
PRINT DATE (YYMMDD):	integer	(0)
PRINT TIME (HHMM):	integer	(0)

Prompt Details

FILE PATHNAME

Enter the pathname of the file to be printed.

ANSI FORMAT?

Enter YES if the file contains ANSI carriage control characters in column 1. Otherwise, enter NO.

LISTING DEVICE OR CLASS

Specify the listing device or the device class name where the file is to be printed.

DELETE AFTER PRINTING?

Enter YES if you want SVQ to delete the file after printing is complete. Otherwise, enter NO.

NUMBER OF LINES/PAGE

Specify the maximum number of lines (from 1 through 255) to be printed on each page.

FORM

Specify the name of the print form to be mounted on the output device.

NUMBER OF COPIES

Specify the number of copies to be printed; the maximum is 255.

BANNER SHEET?

Enter YES if you want to print an identifier sheet as the first page of the output.

PRINT DATE (YYMMDD)

Enter a zero for immediate printing or enter an integer to specify a date for delayed printing.

PRINT TIME (HHMM)

Enter a zero for immediate printing or enter an integer to specify a time for delayed printing. The time specified is based on the 24-hour clock.

Example

In the following example, the QPF command prints the specified print file at 11:00 PM the same day.

```
[ ]QPF
      FILE PATHNAME: MYVOL.MYFILE
      ANSI FORMAT?: NO
LISTING DEVICE OR CLASS: LP01
DELETE AFTER PRINTING?: YES
NUMBER OF LINES/PAGE: 62
      FORM: STANDARD
NUMBER OF COPIES: 1
      BANNER SHEET?: NO
PRINT DATE (YYMMDD): 0
PRINT TIME (HHMM): 2300
```

Messages

PRINT REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

QUEUE INACTIVE—START SCI QUEUE SERVICE THEN REENTER REQUEST

Use the SCIQST command to start queue service.

WARNING: FILE PATHNAME DOES NOT EXIST

SERVICE QUEUE PRINT REQUEST FAILED

First, verify by entering the QMGR command that the service queue file has request space available and that the associated queue has both active and accept status YES. Next, retry the command; occasionally the service queue is busy at the time of your request. Finally, under certain rare conditions, overhead data on the service queue is destroyed, requiring reinitialization. Refer to the QMGR command description (paragraph 5.5.5) for troubleshooting information.

5.10 QXB (PLACE BATCH REQUEST ON XB QUEUE) COMMAND

The QXB command places DNOS Execute Batch (XB) requests on the execute batch stream queue for time-delayed processing or immediate processing to free the originating terminal for concurrent activity.

Prompts

```

PLACE BATCH REQUEST ON XB QUEUE
  INPUT ACCESS NAME: filename@
  LISTING ACCESS NAME: filename@
  EXECUTION DATE (YYMMDD): integer      (0)
  EXECUTION TIME (HHMM): integer        (0)

```

Prompt Details**INPUT ACCESS NAME**

Enter the pathname of the file containing the SCI batch stream.

LISTING ACCESS NAME

Enter the pathname of the device or file to be used for the batch stream listing. This device or file must not be used by any command in the batch stream.

EXECUTION DATE (YYMMDD)

Enter a zero for immediate execution or enter an integer to specify a date for a delayed execution.

EXECUTION TIME (HHMM)

Enter a zero for immediate execution or enter an integer to specify a time for a delayed execution. The time specified is based on the 24-hour clock.

Example

In the following example, the QXB command executes a batch stream with no time delay so that the user's terminal can execute other background tasks.

```

[ ]QXB
PLACE BATCH REQUEST ON XB QUEUE
  INPUT ACCESS NAME: MYVOL.BATSTRM
  LISTING ACCESS NAME: MYVOL.BATLIST
  EXECUTION DATE (YYMMDD): 0
  EXECUTION TIME (HHMM): 0

```

Messages

BATCH REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

QUEUE INACTIVE—START SCI QUEUE SERVICE THEN REENTER REQUEST
Use the SCIQST command to start queue service.

WARNING: INPUT ACCESS NAME DOES NOT EXIST

SERVICE QUEUE BATCH REQUEST FAILED

First, verify by entering the QMGR command that the service queue file has request space available and that the associated queue has both active and accept status YES. Next, retry the command; occasionally the service queue is busy at the time of your request. Finally, under certain rare conditions, overhead data on the service queue is destroyed, requiring reinitialization. Refer to the QMGR command description (paragraph 5.5.5) for troubleshooting information.

Notes

Batches do not run under the user ID of the terminal entering the QXB command. Include any needed synonyms in the batch stream.

5.11 QXBJ (PLACE BATCH REQUEST ON XBJ QUEUE) COMMAND

The QXBJ command places DNOS Execute Batch Job (XBJ) requests on the execute batch job queue for time-delayed processing or immediate processing to free the originating terminal for concurrent activity.

Prompts**PLACE BATCH REQUEST ON XBJ QUEUE**

```

                JOB NAME: alphanumeric
    SYNONYM TABLE PATHNAME: < filename@>
                USER ID: alphanumeric
                PASSCODE: [characters]
                ACCOUNT ID: [characters]
    EXECUTION DATE (YYMMDD): integer           (0)
    EXECUTION TIME (HHMM): integer            (0)

```

Prompt Details**JOB NAME**

Enter a string from 1 to 8 characters long that is a user-defined name used to reference the job.

SYNONYM TABLE PATHNAME

Enter the pathname of the file that contains the synonyms to be passed to the new job. Create this file by using the SCI command Snapshot Name Definitions (SND). The PARMS LIST (IF ANY) prompt in the SND command must contain the new job's input access name and listing access name.

USER ID

Enter the DNOS user ID to be associated with the new job.

PASSCODE

Enter the DNOS passcode to be associated with the new job.

ACCOUNT ID

Enter a string from 1 to 16 characters long that is the account ID for the new job.

EXECUTION DATE (YYMMDD)

Enter a zero for immediate execution or enter an integer to specify a date for a delayed execution.

EXECUTION TIME (HHMM)

Enter a zero for immediate execution or enter an integer to specify a time for a delayed execution. The time specified is based on the 24-hour clock.

Example

In the following example, the SND command as a prerequisite to QXBJ is also shown to illustrate their relationship. QXBJ executes a batch job at 11:00 PM on the same date.

```
[ ]SND
  SNAPSHOT NAME DEFINITIONS
    SYNONYM FILE PATHNAME: MYVOL.QXBJSYN
    PARMS LIST (IF ANY): MYVOL.BATJOB,MYVOL.BATLST
```

```
[ ]QXBJ
  PLACE BATCH REQUEST ON XBJ QUEUE
    JOB NAME: UNAMIT
  SYNONYM TABLE PATHNAME: MYVOL.QXBJSYN
    USER ID: SYSTEM
    PASSCODE: PSW
    ACCOUNT ID:
  EXECUTION DATE (YYMMDD): 0
  EXECUTION TIME (HHMM): 2300
```

BATCH REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

Messages

BATCH REQUEST SUCCESSFULLY ENTERED ON SERVICE QUEUE

QUEUE INACTIVE—START SCI QUEUE SERVICE THEN REENTER REQUEST
Use the SCIQST command to start queue service.

WARNING: SYNONYM TABLE PATHNAME DOES NOT EXIST

SERVICE QUEUE BATCH REQUEST FAILED

First, verify by entering the QMGR command that the service queue file has request space available and that the associated queue has both active and accept status YES. Next, retry the command; occasionally the service queue is busy at the time of your request. Finally, under certain rare conditions, overhead data on the service queue is destroyed, requiring reinitialization. Refer to the QMGR command description (paragraph 5.5.5) for troubleshooting information.

5.12 SCIQSTOP (STOP SCI (PF, XB, XBJ) QUEUE SERVICE) COMMAND

The SCIQSTOP command stops the SCI queue server task.

Prompts

```

STOP SCI(PF, XB, XBJ) QUEUE SERVICE
      ARE YOU SURE?: YES/NO
      STOP DATE (YYMMDD): integer      (0)
      STOP TIME (HHMM): integer        (0)

```

Prompt Details**ARE YOU SURE?**

This prompt guards against accidental usage. Enter YES to activate SCIQSTOP.

STOP DATE (YYMMDD)

Enter a zero for immediate stop or enter an integer to specify a date for a delayed stop action.

STOP TIME (HHMM)

Enter a zero for immediate stop or enter an integer to specify a time for a delayed stop action. The time specified is based on the 24-hour clock.

Example

In the following example, the SCIQSTOP command stops SCI queue service on July 4, 1982 at 2:30 PM. A message appears, verifying successful completion.

```

[ ] SCIQSTOP
STOP SCI (PF, XB, XBJ) QUEUE SERVICE
      ARE YOU SURE?: YES
      STOP DATE (YYMMDD): 820704
      STOP TIME (HHMM): 1430

SCI QUEUE STOP SUCCESSFULLY ENTERED ON SERVICE QUEUE

```

Messages

SCI QUEUE STOP SUCCESSFULLY ENTERED ON SERVICE QUEUE

SCIQST INACTIVE—STOP REQUEST IGNORED

TERMINATION FAILED ON SCI QUEUE

First, verify by entering the QMGR command that the service queue file has request space available and that the XB queue has both active and accept status YES. Next, retry the command; occasionally the service queue is busy at the time of your request. Finally, under certain rare conditions, overhead data on the service queue is destroyed, requiring reinitialization. Refer to the QMGR command description (paragraph 5.5.5) for troubleshooting information.

Notes

If the date and time specified for delayed action precedes the current date and time, immediate action occurs. The SCI XB queue number 2 must have the active and accept status conditions set to YES.

5.13 HOSTSTOP (STOP SPECIFIC HOST QUEUE SERVICE) COMMAND

The HOSTSTOP command stops a specified host queue server task.

Prompts

```

STOP SPECIFIC HOST QUEUE SERVICE
      ARE YOU SURE?: YES/NO
STOP DATE (YYMMDD): integer      (0)
STOP TIME (HHMM):  integer      (0)
QUEUE NUMBER:      integer      (4)

```

Prompt Details**ARE YOU SURE?**

This prompt guards against accidental usage. Enter YES to activate HOSTSTOP.

STOP DATE (YYMMDD)

Enter a zero for an immediate stop or enter an integer to specify a date for a delayed stop action.

STOP TIME (HHMM)

Enter a zero for an immediate stop or enter an integer to specify a time for a delayed stop action. The time specified is based on the 24-hour clock.

QUEUE NUMBER

Specify the number of the queue you want to stop.

Example

In the following example, the HOSTSTOP command stops host queue number 4 on July 4, 1982 at 2:30 PM. A message appears, verifying successful entry of the request.

```
[ ] HOSTSTOP
STOP SPECIFIC HOST QUEUE SERVICE
      ARE YOU SURE?: YES
      STOP DATE (YYMMDD): 820704
      STOP TIME (HHMM): 1430
      QUEUE NUMBER: 4

HOST4 STOP SUCCESSFULLY ENTERED ON SERVICE QUEUE
```

Messages

HOST# STOP SUCCESSFULLY ENTERED ON SERVICE QUEUE

SVQHST# INACTIVE—STOP REQUEST IGNORED

TERMINATION FAILED ON HOST# QUEUE

First, verify by entering the QMGR command that the service queue file has request space available and that the associated queue has both active and accept status YES. Next, retry the command; occasionally the service queue is busy at the time of your request. Finally, under certain rare conditions, overhead data on the service queue is destroyed, requiring reinitialization. Refer to the QMGR command description (paragraph 5.5.5) for troubleshooting information.

Notes

If the date and time specified for delayed action precedes the current date and time, immediate action occurs. The host queue requested for stop action must have the active and accept status conditions set to YES.

Troubleshooting for DNCS

6.1 INTRODUCTION

Occasionally, problems arise with DNCS that require a detailed investigation. This section provides the information needed to diagnose such problems and offers some guidelines on how to approach their solutions. In addition, many of the DNOS troubleshooting procedures explained in the *DNOS Systems Programmer's Guide* also apply to DNCS. If onsite efforts fail to produce a satisfactory remedy, contact the customer representative for DNCS.

The basic procedure for troubleshooting DNCS requires the following steps:

1. Determine which resources are involved in the problem by using Display commands to find the resources with error states.
2. Determine the symptoms of the problem (such as: keyboard stays locked, incomplete log-on, or persistent error messages).
3. Note the state of the DNCS job, as explained in paragraph 4.2.
4. Inspect the DNCS log for error messages or signs of abnormal activity. If DNCS has been restarted, the old log is kept under the file pathname < DNCS > .S\$DNCS.LOG1.
5. Determine the reason for the symptoms.
6. Take corrective actions.

6.2 TAKING A CRASH DUMP

When the Texas Instruments computer running DNCS detects an error that it cannot correct, it displays the error code on the front panel, turns on the FAULT light, and goes into an idle state. When such an error condition occurs, you should write the contents of memory to the crash file. The *DNOS Systems Programmer's Guide* discusses how to record and force a crash dump. The guide also describes a utility (XANAL) that can help you to analyze a crash dump.

Refer to the *DNCS Nucleus Release Information and Update Document* for information on how to report a system crash to Texas Instruments.

6.3 DUMPING TASK MEMORY

The Display FCCC (CP503) or Task Memory DNCS CI command dumps the memory of a specified DNCS task. Generally, this command is used to furnish diagnostic information for offsite problem solving. You are not expected to interpret the dump (Figure 3-5).

Before using the Display Task Memory command, determine the name of the task and the starting address for the dump. Table 6-1 briefly describes each task in the DNCS job.

Table 6-1. DNCS Tasks

Task	Description
DNCSSCT	System control task — Manages the flow of data through DNCS
DNCSPDCT	Physical device control task — Interfaces to DNOS I/O subsystem
DNCSCI	Command Interpreter — Executes DNCS CI commands
DNCSTSR	Terminal services routine — Provides presentation services to stations controlled by DNCS
DNCSDC	Device control — Performs SNA device control functions
DNCSPC	Path control — Performs SNA path control functions
DNCSCLOK	Clock — Times events
DNCSTRP	Transport — Performs remote file transfer function
DNC SNIA	Network interface adapter — emulates an IBM hardware connector
DNC SNAP	Network Access Protocol — Performs X.25 packet level function.
DNC SINAP	Interface for NAP and NIO tasks

Use the XCI command (described in Section 2) to issue the Display Task Memory command, as follows:

```
[ ]XCI C = "DISPLAY PGM = < task> [ADR = < address> ], L = < pathname> "
```

where:

- < task> is the name of the task you want to display, as it appears on the list.
- < address> is the address in the task where the display begins. An odd address reverts to the previous even address. The default address is zero.
- < pathname> is the file pathname that is to receive the dump to be printed later.

6.4 DUMPING FCCC MEMORY

The Display FCCC or Task Memory command dumps the memory of a CP503 (FCCC) board. Generally, this command is used to furnish diagnostic information for offsite problem solving. You are not expected to interpret the dump (Figure 3-5).

Use the XCI command (described in Section 2) to issue the Display FCCC Memory command, as follows:

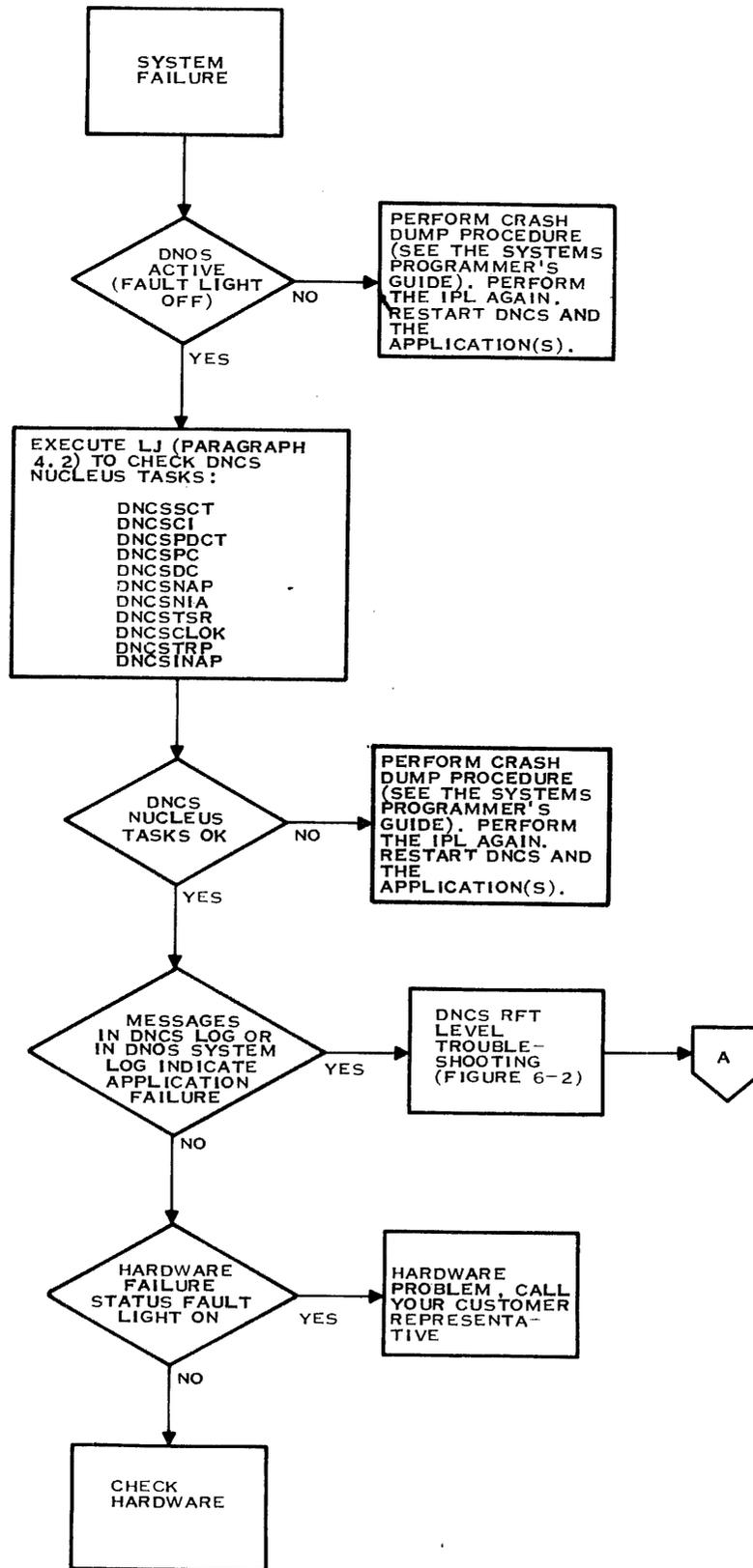
```
[ ]XCI C = "DISPLAY PGM = < FCCC> [ADR = < address> ], L = < pathname> "
```

where:

- < FCCC> is the name of the CP503 (FCCC) board whose memory you want to display.
- < address> is the address in memory where the display begins. An odd address reverts to the previous even address. The default address is > 8000.
- < pathname> is pathname of the file where the command writes the dump listing (to be printed later).

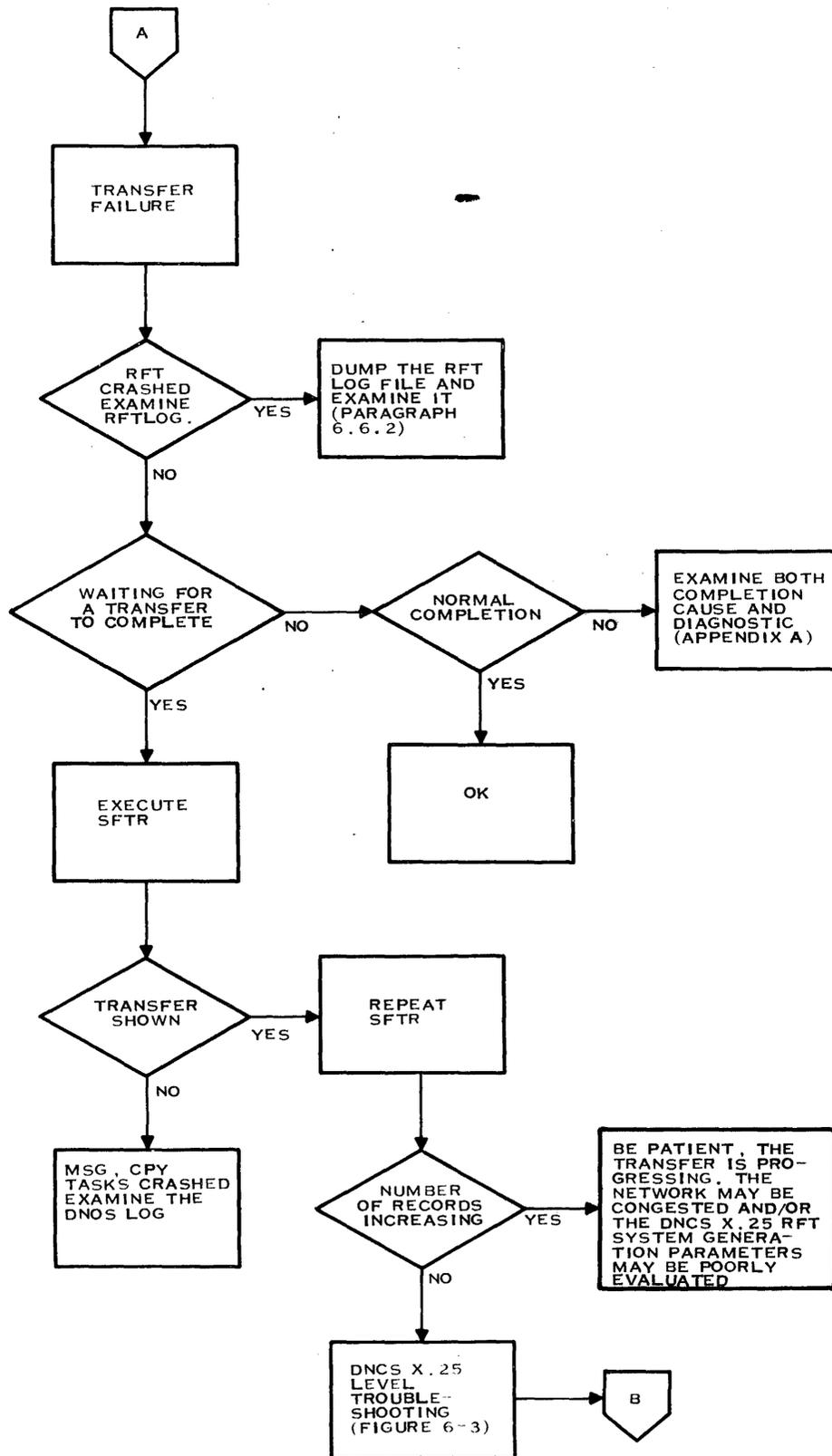
6.5 TROUBLESHOOTING PROCEDURE

The following three figures show the troubleshooting procedure when system failures or abnormal task terminations occur. Figure 6-1 shows the troubleshooting procedure for system failures, Figure 6-2 shows the troubleshooting procedure for RFT level failures, and Figure 6-3 shows the troubleshooting procedure for DNCS X.25 level failures.



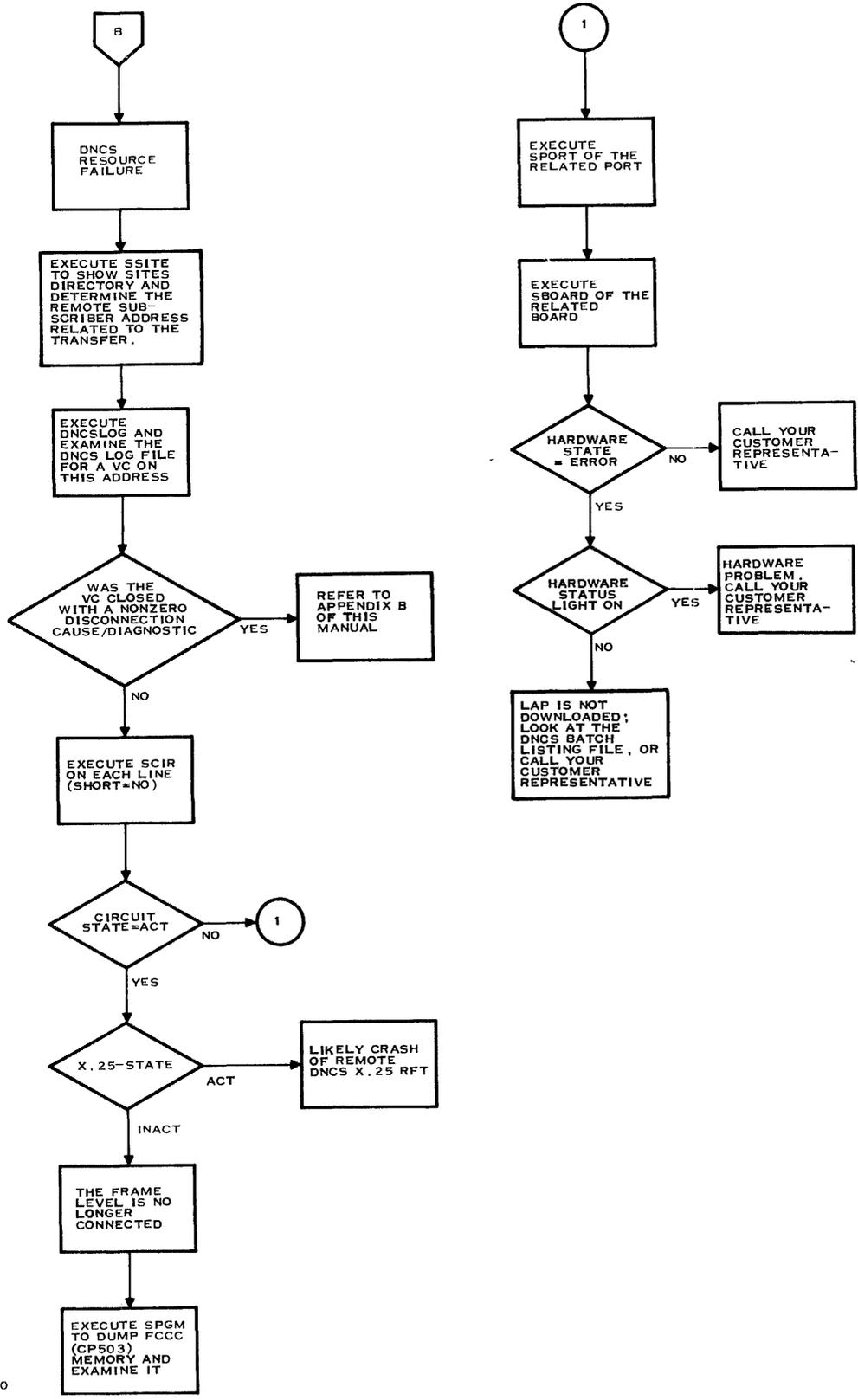
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Figure 6-1. Troubleshooting Procedure for System Failure



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Figure 6-2. RFT Level Troubleshooting



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Figure 6-3. DNCS X.25 Level Troubleshooting

6.6 TASK ABNORMAL TERMINATIONS

The end-actions and recommended operator procedures discussed in the following paragraphs apply when a DNCS or remote file transfer (RFT) task terminates abnormally.

6.6.1 DNCS Task Terminations

No special end actions are taken by DNCS. If you suspect that one of these tasks has crashed, examine the current DNOS log file (.S\$LOG1 or .S\$LOG2) for task termination messages. If you find one, record the message data before requesting customer support (there is no task data to dump, as DNOS removes the crashed task from memory). The tasks DNCSNAP and DNCSTRP perform their own consistency checks and, if they detect an inconsistency, suspend themselves after dumping out their configurable parts (NAPDEF and TRPDEF respectively) on the DNCS log file.

In this case, if this is the reason for the failure, the systems programmer should examine the DNCS log file for the occurrence of a dump. This dump plus preceding data logged onto the DNCS log file should be sufficient for customer support to solve the problem.

6.6.2 RFT Task Terminations

When the RFT task terminates abnormally, it dumps its configurable parts (RFTDEF) onto the RFT log file, and then terminates itself.

The operator should verify that the RFT task has terminated abnormally by examining the RFT log file, using an SF or PF (Show File or Print File) command. If a dump has occurred, immediately copy the RFT log file to some other medium (disk file or printer, for example) for safeguarding before restarting DNCS X.25 RFT (as this action can reinitialize the log file and thus destroy the dumped data).

The operator should also examine the DNCS log file (using the DNCSLOG command if DNCS is active) for any internally detected DNCS system errors that may have been detected before the failure occurred (Appendix A). If error messages are logged, a copy of the DNCS log file should be recorded before requesting customer support.

No special end actions are taken by the other tasks making up the RFT job (OPR, CPY, MSG). If the operator suspects that one of these tasks has crashed, then the current DNOS log file (.S\$LOG1 or .S\$LOG2) should be examined for task termination messages. If one is found applying to one of the above three tasks, then the message data should be recorded before requesting customer support (there is no task data to dump, as DNOS removes the crashed task from memory).

6.7 TRACE

The DNCS trace facility is available for maintenance personnel to use when task dumps, taken at the time of a system failure, do not resolve the reason for the recurrent failure.

Any part of DNCS and/or RFT can be traced. Trace levels are defined using the APGM command described in Section 2. When one or more trace levels are defined as applying to a task, then trace data is written onto the DNCS log file for DNCS task traces, and/or onto the RFT log file for RFT task traces.



Appendix A

DNCS CI Messages

This appendix explains each message returned by the DNCS Command Interpreter (DNCS CI) and recommends an appropriate user action. DNCS CI messages consist of the prefix DNCS, a message number that identifies the specific message, and a letter indicating one of the following message types:

Letter	Message Type
I	Informative (no error condition)
W	Warning (possible error condition)
E	Error (definite error condition)
S	System (DNOS error)

The error messages detailed in this appendix use the following field notations:

Notation	Meaning
< station >	DNCS station name (resource name in the DNCS generation)
< node >	Node (logical unit) name
< appl >	vpu__name.appl__name (application name will be blank if the application was not mentioned in the DNCS generation)

DNCS0001 I < station > : < node > SESSION WITH < appl > IS LOGGED ON

Explanation:

A successful return has been made to a previously established session between your DNCS < node > and the application < host > .

User Action:

None is required.

DNCS0002 W < station> : < node> ATTEMPTING SESSION WITH < appl>

Explanation:

DNCS has issued a Log On request to establish a session between < node> and < appl>. < station> accesses the application through < node>. (SNA: INIT-SELF request was issued.)

User Action:

Wait for a message that indicates whether the Log On command succeeded or failed.

DNCS0007 W < station> : < node> TERMINATING SESSION WITH < appl>

Explanation:

DNCS has received a Log Off command or a session change request from < station> and has issued a Log Off command to terminate the session between < node> and < appl>. (SNA: TERM-SELF request was issued.)

User Action:

Wait for the LOGOFF or the session change request log-on to complete.

DNCS0009 W < station> : < node> ENTER USER ID

Explanation:

You have entered a command to log on to an < appl> that has ID Required specified in the configuration, but you did not include any user information. This message appears only when the Log On command itself does not need to be entered again (for example, when using a VDT).

User Action:

Type your application user ID in the space following the Log On command and enter the command again.

DNCS0010 W < station> : < node> REENTER REQUEST AND INCLUDE A USER ID

Explanation:

Like in message DNCS0009, some user information is required. This message appears when the Log On command as well as the user information must be typed (for example, when using XKSR).

User Action:

Retype the Log On command and include the user information.

DNCS0011 W < station> : < node> SESSION WITH < appl> LOGGED OFF

Explanation:

The session between < appl> and < node> has been terminated by your Log Off or session change command or by < appl> or a VTAM command.

User Action:

None is required; you can log on to the same or another application, or you can simply stop using DNCS.

DNCS0012 I < station> : < node> SESSION WITH < appl> LOGGING ON

Explanation:

This message indicates that you are returning to a session for which the Log On request has been issued but not completed. The Log On request has been received and acknowledged, but the application is still working on it (SNA: DNCS is waiting for BIND from the application.)

User Action:

Wait for log-on completion or rejection. You can issue a Log Off command if you do not want to wait any more.

DNCS0013 I < station> : < node> SESSION WITH < appl> IS LOGGED ON

Explanation:

The log-on sequence has completed successfully. The application can also send a logged on message. (SNA: SDT request was received and acknowledged.)

User Action:

You may begin using the application.

DNCS0014 I < station> : < node> WAITING FOR REPLY FROM < appl>

Explanation:

You have attempted to send a request to the < appl> when it is not ready to receive. This message does not destroy the contents of your display.

User Action:

Wait long enough to be sure that < appl> will not send the reply. Then either contact your network or application manager or attempt to restore the session state by logging off and then logging on the application. Certain applications will accept SIGNAL commands, PA1 on V914 and VDT and !@ on KSR, to enable you to send.

DNCS0015 I < station> : < node> SHOULD SEND REQUEST TO < appl>

Explanation:

You have returned to an active session in which the application program has indicated that you must send something to it before it can proceed.

User Action:

You must either send the information that the application program needs, or log off the session. Other application dependent actions may be available.

DNCS0016 I < station> : < node> RECOVERING SESSION WITH < appl>

Explanation:

Some session protocol error has occurred, and DNCS is trying to recover the session state in order to allow you to continue using the application.

User Action:

Reenter your last request and try it again. If this message or other failure messages appear, reset your session with < appl> by logging off and logging on again.

DNCS0017 I < station> : < node> SESSION WITH < appl> IS SLOWED DOWN

Explanation:

The host system has detected that it is becoming overloaded and has issued slowdown commands to its users in order to allow the host to catch up with the pending work.

User Action:

You can wait for a message from the application indicating that the slowdown is over, or you can log off this session.

DNCS0018 I < station> : < node> LOGON TO.< appl> IN PROGRESS

Explanation:

You have switched to a session for which the Log On request has been issued, but no response to that request has been received. (SNA: INITSELF has been issued, but the response has not yet been received.)

User Action:

Wait for another message that indicates whether the Log On request succeeded.

DNCS0020 E < station> : < node> LOGON FAILED; < appl> NOT AVAILABLE

Explanation:

The Log On command failed because the application is not currently running in the host. (SNA: NSPE, sense data = X'0801')

User Action:

Arrange to have the application started or look for something else to do.

DNCS0021 E < station> : < node> LOGON FAILED; < appl> SESSION MAX

Explanation:

Some network element, usually the application, rejected the Log On request because it could not support any more sessions, or VTAM is running very slowly and has not yet completed an earlier Log Off command for the node. (SNA: NSPE, sense data = X'0805')

User Action:

Try again later.

DNCS0022 E < station> : < node> LOGON FAILED; < appl> UNKNOWN

Explanation:

Some SNA resource named in the Log On command was not recognized. This is usually the application name, but it could be the node name, especially in Cross Domain sessions. (SNA: NSPE, sense data = X'0806')

User Action:

Contact your network manager and verify all the names needed.

DNCS0023 E < station> : < node> LOGON FAILED; < appl> MISSING ID

Explanation:

Certain applications require that a requestor ID be included in the Log On request. In DNCS, the requestor ID is < station>. It is included in the Log On request if the ID required is specified for the VPU in the DNCS system generation. (SNA: NSPE, sense data = X'0810')

User Action:

Contact your network manager and arrange for adjustments in DNCS or the application.

DNCS0024 E < station> : < node> LOGON FAILED; < appl> SESSION ACTIVE

Explanation:

The host or application thinks that the request session is already established. This can happen if some network node between you and the application has been reloaded and the Cross Domain host has not been notified of this event. (SNA: NSPE, sense data = X'0815')

User Action:

Issue a Log Off command and then issue Log On again.

DNCS0025 E < station> : < node> LOGON FAILED; < appl> PARMs INVALID

Explanation:

Some information in the Log On command was not valid. This is usually the log mode name, indicating a problem in the VTAM system generation or the application interface to VTAM. (SNA: NSPE, sense data = X'0833'. Invalid log mode name, requestor ID, possibly user data. This may also result from BIND being rejected.)

User Action:

Contact network manager

DNCS0026 E < station> : < node> LOGON FAILED; < appl> REMOTE SSCP DOWN

Explanation:

The application requested is in a different host, but the systems services control point (SSCP) session manager is not running. (SNA: NSPE, sense data = X'0842')

User Action:

Wait until the remote SSCP becomes active or contact the remote host's network manager.

DNCS0027 I < station> : < node> APPLICATION < appl> NOTIFY RECEIVED

Explanation:

An unexpected SNA NOTIFY was received. This message has not changed the session state or the data on your station.

User Action:

Make a note to tell the SNA network manager that this has happened; then press the Up Arrow key. The message line will be restored to its previous value.

DNCS0028 E < station> : < node> INIT < appl> FAILED; PU IS INACTIVE

Explanation:

The Log On command was rejected because the PU has not been activated.

User Action:

Contact the network operator.

DNCS0029 E < station> : < node> INIT < appl> FAILED; NO LU AVAILABLE

Explanation:

The Log On command was rejected because the LU assigned to the station was inactive or there were no active LUs in the LU pool for the VPU.

User Action:

Wait until an LU becomes available. If you do not issue any more commands from your station, DNCS will reissue the Log On command for you when an LU becomes available.

DNCS0030 E < station> : < node> INIT < appl> FAILED; SESSION MAX

Explanation:

Some network element, usually the application, cannot support any more sessions. If VTAM is overloaded, it is also possible that VTAM has not finished an earlier log-off for the node. (SNA: - RSP(INIT - SELF), sense data = X'0805')

User Action:

Wait from two to five minutes; then try to log on again. If it fails again, contact your network operator.

DNCS0031 E < station> : < node> INIT < appl> FAILED; APPL UNKNOWN

Explanation:

VTAM did not recognize the application named in the Log On command. (SNA: -RSP(INIT-SELF) sense data = X'0806')

User Action:

Verify that the synonym or application name is spelled correctly.

DNCS0032 E < station> : < node> INIT < appl> FAILED; MISSING ID

Explanation:

The application rejected the Log On request because a requestor ID was not included. In DNCS the requestor ID is < station> and is included when ID Required is selected for the VPU. (SNA: -RSP(INIT-SELF) sense data = X'0810')

User Action:

Contact SNA network administrator for instructions.

DNCS0033 E < station> : < node> LOGOFF OF < appl> FAILED; PU IS INACTIVE

Explanation:

The Log Off command was rejected because the PU is not active. The session is not terminated because SNA has the capability to restart the PU and LUs and also maintain the current session. This is an internal SNA function.

User Action:

Wait for the PU to become active.

DNCS0034 E < station> : < node> INITIATE < appl> FAILED; LINK IS INACTIVE

Explanation:

The Log On command failed because the virtual circuit (VC) line was broken and the request could not be delivered to the host computer. This is an internal SNA function.

User Action:

Check the circuit, port, and board status.

DNCS0040: END OF FILE

Explanation:

The help file facility has displayed the complete help file.

User Action:

None is required. This is a normal completion message when displaying the help files through XCI. If this message occurs while displaying a help file through a VDT2 Emulator, someone has modified your help file.

DNCS0041: E NO VALID PORT FOUND FOR STATISTICAL DISPLAY.

Explanation:

No valid port could be found while trying to display the statistics for the STATS option.

User Action:

Make sure that the circuit specified is physically and logically connected to a port and retry the command.

DNCS0042 E BOARD I/O ERROR

Explanation:

The STATS option was not able to read the statistics counters from the board supporting the port or circuit specified.

User Action:

Make sure that the port or circuit specified is for an SDLC link. Make sure that the board is present and active.

DNCS0043 E ASSOCIATED SITE UNKNOWN

Explanation:

You specified a site name that is not currently defined in the X.25 sites table.

User Action:

Determine whether the site name you entered is correct. If not, reenter the command using the correct name. If the site name you entered is correct, you can add the site by using the ASSITE command through SCI or by using the ASSIGN SITE command through DNCS CI.

DNCS0044 E FILE I/O ERROR

Explanation:

DNCS cannot access the disk resident sites table.

User Action:

Another user is modifying the disk resident sites table. Wait until the modification completes. Then, retry the command.

DNCS0045 I SITE/ROUTE BUSY TRY AGAIN LATER

Explanation:

You tried to modify the definition of a site or route that is currently in use.

User Action:

Wait until the current transmission is complete, or terminate the transfer before retrying the operation.

DNCS0050 I < command> COMPLETE**Explanation:**

The indicated < command> has completed successfully.

User Action:

None is required. You can now enter another command.

DNCS0051 E COMMAND NOT RECOGNIZED**Explanation:**

The command entered is not a valid DNCS command.

User Action:

Check for spelling errors and missing fields. Reenter the command.

DNCS0052 E INVALID < command> SYNTAX**Explanation:**

A syntax error has been detected in the indicated < command> .

User Action:

Correct the command syntax and reenter the command.

DNCS0053 E INVALID USE OF < entry>**Explanation:**

The command was recognized, but an invalid parameter < entry> was entered. When < entry> is END WORD, it indicates that something was expected at the end of the command but was not found.

User Action:

Correct the command syntax and reenter the command.

DNCS0054 E INVALID < keyword> : < data>**Explanation:**

The < keyword> in the most recent command was one of the following strings: NODE, ADR, ID, or PGM. However, the < data> string following the keyword in the command was not valid for that keyword.

User Action:

The < data> entered is not a valid node name, address, ID, or program name. Correct the command syntax and reenter the command.

DNCS0055 I UNSUPPORTED FUNCTION

Explanation:

Either the command is not supported by your configuration, or the command is not implemented in the current release of DNCS.

User Action:

None is required.

DNCS0056 E NOT ENOUGH MEMORY TO COMPLETE < command >

Explanation:

When the system executed the command, not enough memory was in the system to complete the command.

User Action:

Retry the command after a few minutes. If the system does have adequate memory and you continue to receive this message, contact your customer representative.

DNCS0057 E REQUIRED PARAMETER OMITTED

Explanation:

One or more fields have been omitted in the command.

User Action:

Correct the command syntax and reenter the command.

DNCS0058 E SYSGEN ERROR

Explanation:

A system generation error occurred. Usually this error occurs because a resource has been improperly defined.

User Action:

Correct the data in system generation and regenerate DNCS.

DNCS0059 E I/O OR BUFFER ERROR

Explanation:

An I/O error has occurred during the processing of the command. For example, a command was entered to dump the memory of a CP503 (FCCC) board that had been generated but was not in the chassis.

User Action:

Verify that the CP503 (FCCC) board is functioning correctly. Verify that connections to the CP503 board are made correctly. Try restarting the CP503 board. If the problem persists, shut down the circuit and call your customer representative.

DNCS0060 E UNDETERMINABLE ERROR**Explanation:**

The command processor detected an unexpected error while trying to perform the command.

User Action:

Check the syntax on fields and responses and retry the command. Check that the command is valid for the configuration (e.g.—SNA command on a non-SNA system). If the error persists, call your customer representative.

DNCS0061 I ACTION NOT NEEDED — RESOURCE/ITS OWNER IS ALREADY ACT/INACT/ STOP**Explanation:**

You have issued a command to stop an inactive resource or a command to start an active resource. The command was not performed.

User Action:

None is required.

DNCS0062 E FIRST NAME MUST BE A CIRCUIT NAME**Explanation:**

The first identifier name must be a valid circuit name. A correct example is !ASSIGN C02 TO P021.

User Action:

Correct the command syntax and reenter the command.

DNCS0063 E SECOND NAME MUST BE A PORT NAME**Explanation:**

This command is returned when an invalid port name is entered in an Assign Backup Port command or an Assign Circuit to a primary port command.

User Action:

Correct the command syntax. Reenter the command.

DNCS0064 E CIRCUIT IS NOT CONNECTED TO A PORT**Explanation:**

An attempt to activate or deactivate a circuit was not processed because the circuit is not attached to a port.

User Action:

Assign the circuit to a port so that the command can be executed.

DNCS0065 E INVALID NAME – SYSGEN ERROR

Explanation:

A resource name is defined in the system control task but not in the task processing the command. This error can result from a DNCS system generation that generated incorrect data.

User Action:

First, retry the operation. If the error persists, check to see that you have the correct version of XDGU. Then, verify that all patches have been applied. If these checks do not reveal the cause of the error, report the problem.

DNCS0066 E INVALID RETURN CODE – <xx>

Explanation:

DNCS CI is not compatible with all of the other DNCS tasks. This can result from the system or patches being installed improperly or from use of X.25 remote file transfer (RFT) commands when RFT is not installed.

User Action:

If xx equals FF, verify that the command is valid for the configuration. Verify that the system and any patches have been installed properly. Check patch listing files for errors. If no errors are found, report the problem. Include the command text and the return code <xx>. Do not use X.25 RFT commands if RFT is not installed.

DNCS0067 E INVALID ORIGINATION NAME – SYSGEN ERROR

Explanation:

When you tried to assign a circuit to a port, the name of the circuit was known by DNCS but unknown by the task controlling the circuit.

User Action:

Regenerate the system. If the problem persists, report it to your network manager.

DNCS0068 E INVALID DESTINATION NAME – SYSGEN ERROR

Explanation:

When trying to assign a circuit to a port, the name of the port was known by DNCS, but unknown to the task controlling the port.

User Action:

Regenerate the system. If the problem persists, report it to your network manager and include the command text.

DNCS0069 E ORIGINATION RESOURCE NOT INACTIVE

Explanation:

When you assign one port or circuit to another port (as in the Backup commands), both resources named in the command must be inactive before the command can be processed. This error indicates that the first resource was active.

User Action:

Execute a Stop command to deactivate the resource.

DNCS0070 E DESTINATION RESOURCE NOT INACTIVE

Explanation:

When you assign one port or circuit to another port (as in the Backup commands), both resources named in the command must be inactive before the command can be processed. This error indicates that the second resource was active.

User Action:

Execute a Stop command to deactivate the resource.

DNCS0071 E CIRCUIT HAS NO PORT

Explanation:

The circuit named in the command is not connected to a port.

User Action:

Assign the circuit to a port.

DNCS0072 E CIRCUIT HAS NO BACKUP OR ALREADY ON BACKUP

Explanation:

The named circuit is connected to a port that has no backup port assigned, or the circuit is already using the backup port.

User Action:

Assign a backup port.

DNCS0073 E INVALID ORIGINATION RESOURCE

Explanation:

You have entered the wrong type of resource in the first resource field of the command.

User Action:

Check the syntax of the command, and then check the type of the resource that the command modifies.

DNCS0074 E PORT IS NOT ON BACKUP

Explanation:

The circuit is not currently assigned to its backup port. This should occur only when a command to change the circuit from backup to primary port is issued and the circuit is already using the primary port.

User Action:

Check the name of the circuit entered in the command. Reenter the command.

DNCS0075 E < station name> IS NOT A HARDCOPY DEVICE

Explanation:

When a printer was assigned to a VDT, the given resource name of the printer was not a printer.

User Action:

Change the resource name to a printer name and reenter the command.

DNCS0076 E < station name> IS NOT A VDU DEVICE

Explanation:

When a printer was assigned to a VDT, the VDU = < station name> field did not contain the resource name of a VDT device.

User Action:

Change the resource name in the "VDU =" field to that of a VDT and reenter the command.

DNCS0077 I < station name> DOES NOT HAVE A HARDCOPY DEVICE

Explanation:

This message is in response to the hard-copy inquiry (!H). You can use the VDU = parameter to inquire about a VDU other than the one at which the command was entered.

User Action:

Assign a printer to the terminal if needed.

DNCS0078 I HARDCOPY DEVICE FOR < station name> IS < printer>

Explanation:

This message is in response to the hard-copy inquiry (!H).

User Action:

Assign a different printer to the terminal if needed.

DNCS0079 | HARDCOPY DEVICE FOR < station name> CHANGED TO < printer>**Explanation:**

This message is the confirmation of a hard-copy change request (!H < printer>). You can use the VDU= parameter of the HARDCOPY command to change the printer for a terminal other than the one at which the command was entered.

User Action:

None is required.

DNCS0080 | SECURITY VIOLATION**Explanation:**

The password has been omitted from a command that requires it, or the password that was entered is invalid.

User Action:

Check the password spelling. Reenter the command and include the password.

DNCS0081 | SEGMENT NOT AVAILABLE. RETRY LATER**Explanation:**

The operating system failed to activate the requested segment for executing the entered command.

User Action:

Retry the command later. If the problem persists, take a crash dump and report the problem. To take a crash, follow the instructions in Section 6.

DNCS0084 E RANGE ERROR: STARTING ADDRESS + LENGTH OF DATA > TASK MAX ADDRESS**Explanation:**

The given memory address is outside the task address space.

User Action:

Correct the starting address or length of data.

DNCS0086 hhmm SITE TABLE OVERFLOW**Explanation:**

A station operator has attempted to create a site, using the ASITE command, and the sites table is full.

User Action:

Delete an unused site, using the command DSITE. If this is not possible, generate a new DNCS, with a larger sites table.

DNCS0087 hhmm INVALID DTE ADDRESS

Explanation:

An operator command specified a data terminal equipment (DTE) address with an incorrect format.

User Action:

Reenter the command, with a valid DTE address format (up to 15 decimal digits).

DNCS0088 hhmm INVALID CUG

Explanation:

An operator command specified a Closed User Group (CUG) with an incorrect format.

User Action:

Reenter the command, with a valid CUG format (up to 2 decimal digits).

DNCS0089 hhmm SITE PARAMETERS MODIFIED

Explanation:

An ASITE operator command specified an existing site. The modification has been applied.

User Action:

None (normal completion).

DNCS0090 hhmm MODIFICATION FORBIDDEN

Explanation:

Attempted to modify an existing site, while one or several sessions were active, or attempted to add a site/route name that duplicates a route/site name.

User Action:

Wait for the end of currently active sessions before modifying the site parameters.

DNCS0091 hhmm SITE DOES NOT EXIST

Explanation:

A DSITE or SSITE command specified a site that does not exist in the sites table.

User Action:

Reenter the command with an existing site name.

DNCS0092 hhmm SITE DELETION FORBIDDEN

Explanation:

A station operator attempted to delete the local site, or a remote site connected to the local site by a permanent VC, or a remote site with active sessions.

User Action:

None of the sites listed above can be deleted.

DNCS0093 hhmm UNKNOWN DATA LINK

Explanation:

A station operator specified a DTE address not in the current DNCS configuration.

User Action:

Reenter the command, with an existing DTE address.

DNCS0094 hhmm UNKNOWN LOGICAL CHANNEL

Explanation:

A station operator specified a VC number not defined for the DTE in the current DNCS configuration.

User Action:

Reenter the command, with an existing VC number.

DNCS0095 hhmm INVALID NETWORK NAME

Explanation:

A station operator specified a network name not defined in the current DNCS configuration.

User Action:

Reenter the command, with an existing network name.

DNCS0096 hhmm INVALID NETWORK ID

Explanation:

A station operator specified a network ID not defined in the current DNCS configuration.

User Action:

Reenter the command, with an existing ID name.

DNCS0097 hhmm I REPLY TRUNCATED

Explanation:

The display has been truncated.

User Action:

Reenter the command.

DNCS0700 I < station> < flash message>

Explanation:

< flash message> is the message sent to the screen by the ASSIGN FLASH = < message> command. This is an operator message. An example is as follows:

DNCS0700 I SYSTEM GOING DOWN IN 5 MINUTES. PLEASE LOGOFF.

User Action:

Read the message and act accordingly.

DNCS0701 E < station name> IS SHUT DOWN

Explanation:

DNCS did not start the terminal because of a DNCS system generation error.

User Action:

Change the DNCS system generation data for the terminal. Regenerate the system. If the problem persists, report it to your customer representative.

DNCS0702 I < station name> : < node> DISPLAY OF DATA ABORTED

Explanation:

The application program has stopped sending a message before the end of the message.

User Action:

Proceed with the application.

DNCS0703 E < station name> : < node> PLEASE WAIT: HOST UNABLE TO RECEIVE DATA

Explanation:

The station LU is not in a valid SNA state to send data to the host. If you do not want to wait, try sending an attention to the host by pressing the A1 key on a 914A terminal or by using the two-key sequence Exit + on a 931 terminal.

User Action

Wait, send attention, or log off.

DNCS0704 W < station name> : < node> LAST INPUT NOT ACKNOWLEDGED

Explanation:

The network between the terminal and the application is slower than you. When a message sent to the application requests a definite response, you must wait until the response is received before sending another message.

User Action:

Wait for acknowledgment. If the problem is not cleared, use the command !LOGOFF and then log on to the application again.

DNCS0705 I < station name> HOST NOT DEFINED FOR MODE KEY, PLEASE USE ANOTHER MODE KEY

Explanation:

You used a mode key for which no application is defined.

User Action:

Select a different mode key or log on another way.

DNCS0706 W ***ATTENTION*** SENT TO APPLICATION

Explanation:

You sent an attention sequence to the application.

User Action:

After you receive a message from the application, follow the message instruction.

DNCS0707 I YOU ARE LOGGED OFF, PLEASE LOGON.

Explanation:

You are not logged on to any application. This error occurs if DNCS stops while the terminal is logged on to an application. When DNCS is started, the terminal is logged off and this message appears.

User Action:

Enter the application name to log on to the application again.

DNCS0710 I < station name> : < node> LOST SYNCHRONIZATION, PLEASE RETRY

Explanation:

DNCS internal states are not compatible with the state of the terminal.

User Action:

Log off the application.

DNCS0713 E < station name> : < node> LAST MESSAGE TO DEVICE INCOMPLETE

Explanation:

The terminal timed out while waiting on the last block of a message. You entered data after the time-out was detected.

User Action:

Reenter the request.

DNCS0714 E < station name> RESTARTED

Explanation

The terminal has been restarted by a DNCS operator to recover an error.

User Action:

Reenter the last request.

DNCS0799 I < station> : < node> SNA RESPONSE > XXYY

Explanation:

A negative response > XXYY (a four-digit hexadecimal number) has been received from DNCS, VTAM, or the application.

User Action:

Depending on the value of the response code, either continue or log off. The SNA response can be interpreted through IBM SNA documentation.

DNCS0902 E < station> ONLY V914 TERMINALS CAN BE DOWNLOADED

Explanation:

Either the requested version identifier of the download module is invalid; or the download module format is invalid; or you tried to download a station that is not a 914A.

User Action:

Ensure that the requested download module exists and that the file format is correct. (Only download 914As.)

DNCS0903 E < station> COMMANDS MUST NOT EXCEED 3 LINES

Explanation:

The buffer is full. You entered more than 240 characters in the command message. It is possible to do this from XKSR.

User Action:

If you are trying to send a request to your application, make sure that the request does not begin with an exclamation point (!). The ! is used to send a request to DNCS CI.

If you are using a VDT2 emulator, use the two-key sequence Exit + S to clear the screen. If you are using a 914, press the SYSREQ key to clear the screen. Then reenter the command.

DNCS0904 E < station> UNKNOWN SESSION PATH NAME

Explanation:

The VPU name in the < vpu> .< appl> form of the Log On command was not recognized; it did not match any VPU specified in the DNCS system generation.

User Action:

Correct the spelling of the VPU name and reenter the Log On command. If you do not know the correct spelling, check the names in your site notebook or read the DNCS configuration file.

DNCS0905 E < station> SYSTEM BUSY - TRY AGAIN IN A FEW SECONDS**Explanation:**

This message indicates that DNCS was not able to obtain enough memory to process your command. This happens most often during log-on requests.

User Action:

Try again in 5 to 10 seconds.

DNCS0907 E < station> UNSUPPORTED OR INVALID REQUEST**Explanation:**

Either your configuration does not support the command you entered, or the current release of DNCS does not support the command.

User Action:

No action is required.

DNCS0908 E < station> UNABLE TO OBTAIN SESSION PATH**Explanation:**

DNCS could not obtain the internal tables needed to support the session specified for the last Log On command. Possibly the station is not being permitted to use the VPU mentioned or implied by a synonym.

User Action:

Verify that your DNCS configuration permits you to log on to the application. If the problem persists, perform a new DNCS system generation with the mode record added to your station definition.

DNCS0909 E < station> INVALID COMMAND SYNTAX**Explanation:**

A syntax error was detected in the session control command handler. The possible commands are Log On, Log Off, and Download.

User Action:

Correct the syntax error and reenter the command. Check Section 3 for the correct syntax.

DNCS0912 E < station> UNKNOWN OR INVALID IDENTIFIER**Explanation:**

The station name mentioned in a Log On, Log Off, or Download command was not found in the DNCS name tables.

User Action:

Correct the name and reenter the command. If you do not know the correct name, you can display all of the valid names by using the DISPLAY TERMS command.

DNCS0913 I < station> LOGON BEING ATTEMPTED FOR REQUESTED TERMINAL

Explanation:

The requested log on for another device is being processed.

User Action:

No action is required.

DNCS0914 E < station> CI BUSY – RETRY IN A FEW SECONDS

Explanation

CI is processing a request from another station.

User Action:

Wait 10 seconds and reenter the command.

DNCS0915 E < station> PRINTER NOT AVAILABLE

Explanation:

The printer assigned (as the hard-copy station) to your video station is not working.

User Action:

Check the printer to see if it is working. Any action to correct the problem from your station will first clear the screen. Therefore, be sure that you can recover the data shown on the screen. Activate your hard-copy station or assign a new one.

DNCS0916 E < station name> PRINTER NOT ASSIGNED

Explanation:

A print request was initiated by the Print key on a display station without a hard-copy device associated with it.

User Action:

Use the DNCS CI Hard-Copy command to associate a printer with the station. Then, retry the operation. (DNCS generation can make a permanent hard-copy assignment.)

DNCS0917 E < station name> : PRINTER BUSY

Explanation:

You have used the Print key, but the associated printer is busy.

User Action:

Check the status of the printer, or wait for it to become available.

DNCS0918 I < station name> DOWNLOADING REQUESTED TERMINAL**Explanation:**

The requested download operation has been sent to the station named in the Download (!DWNLD) command.

User Action:

No action is required.

DNCS0921 I < station> STILL PROCESSING A PREVIOUS REQUEST —RETRY**Explanation:**

DNCS has not completed execution of an earlier request from your station.

User Action:

Wait a few seconds and try the request again.

DNCS0922 I < station name> LOGOFF BEING ATTEMPTED FOR REQUESTED DEVICE**Explanation:**

The requested log-off for another device is being initiated.

User Action:

No action is required.

DNCS0923 E < station name> CURRENTLY SELECTED SESSION IS NOT LOGGED ON**Explanation:**

You issued a Log Off command for a station that is not logged on to any application.

User Action:

No action is required.

DNCS0951 E < station> UNKNOWN SSCP REQUEST: < hex data>**Explanation:**

An unexpected and unidentifiable message was received from the host system services control point (SSCP). This message will not have any effect on your current session.

User Action:

Report this message to the network operator and then continue to use your terminal. On video stations, the message is replaced by the original contents of line 24 when you start using your terminal again.

DNCS0952 E < station> LOGON FAILED; SENSE CODE = < hex data>

Explanation:

The Log-on command failed but DNCS could not interpret the reason for the failure.

User Action:

Report the failure and the sense code to the network administrator. The sense code may be interpreted through IBM SNA documentation.

DNCS0953 E < station> LOGOFF FAILED; SENSE CODE = < hex data>

Explanation:

DNCS received a negative response to the Log Off command but could not interpret the sense code (the reason for the failure). Possibly, the session terminated.

User Action:

First, display your session status by using commands appropriate for your station. If the session is terminated, no action is required. Then if the session still exists, issue Log-off again. If the session still exists, contact the network SNA operator.

DNCS1501 E ABNORMAL TERM CODE OF: < xxyy>

Explanation:

The source of the error depends on the value of < xxyy> , as follows:

- | | |
|---------------|--|
| If < xx> = 00 | then yy is a DNCS-IPC error code described in Table A-1. |
| If < xx> = 01 | then yy is the I/O SVC internal error codes and the error occurred during initialization of the output file. |
| If < xx> = 02 | then yy is the I/O SVC internal error codes and the error occurred during the reception of data from DNCS CI. |
| If < xx> = 03 | then yy is the I/O SVC internal error code and the error occurred during the writing of data to the output file. |
| If < xx> = DE | then yy is an internal error code associated with receiving data from the DNCS-IPC channel. The explanation of the error depends on the value of yy, as follows: |
| yy = 01 | indicates that no data was received. |
| yy = 02 | indicates that an internal control block is incorrect. |
| yy = 03 | indicates that an internal control for an output operation is incorrect. |
| yy = 04 | indicates that the data length received was greater than EMSCI can accept. |

DNCS0918 I < station name> DOWNLOADING REQUESTED TERMINAL**Explanation:**

The requested download operation has been sent to the station named in the Download (!DWNLD) command.

User Action:

No action is required.

DNCS0921 I < station> STILL PROCESSING A PREVIOUS REQUEST —RETRY**Explanation:**

DNCS has not completed execution of an earlier request from your station.

User Action:

Wait a few seconds and try the request again.

DNCS0922 I < station name> LOGOFF BEING ATTEMPTED FOR REQUESTED DEVICE**Explanation:**

The requested log-off for another device is being initiated.

User Action:

No action is required.

DNCS0923 E < station name> CURRENTLY SELECTED SESSION IS NOT LOGGED ON**Explanation:**

You issued a Log Off command for a station that is not logged on to any application.

User Action:

No action is required.

DNCS0951 E < station> UNKNOWN SSCP REQUEST: < hex data>**Explanation:**

An unexpected and unidentifiable message was received from the host system services control point (SSCP). This message will not have any effect on your current session.

User Action:

Report this message to the network operator and then continue to use your terminal. On video stations, the message is replaced by the original contents of line 24 when you start using your terminal again.

DNCS0952 E < station> LOGON FAILED; SENSE CODE = < hex data>

Explanation:

The Log-on command failed but DNCS could not interpret the reason for the failure.

User Action:

Report the failure and the sense code to the network administrator. The sense code may be interpreted through IBM SNA documentation.

DNCS0953 E < station> LOGOFF FAILED; SENSE CODE = < hex data>

Explanation:

DNCS received a negative response to the Log Off command but could not interpret the sense code (the reason for the failure). Possibly, the session terminated.

User Action:

First, display your session status by using commands appropriate for your station. If the session is terminated, no action is required. Then if the session still exists, issue Log-off again. If the session still exists, contact the network SNA operator.

DNCS1501 E ABNORMAL TERM CODE OF: < xxyy>

Explanation:

The source of the error depends on the value of < xxyy> , as follows:

- | | |
|---------------|--|
| If < xx> = 00 | then yy is a DNCS-IPC error code described in Table A-1. |
| If < xx> = 01 | then yy is the I/O SVC internal error codes and the error occurred during initialization of the output file. |
| If < xx> = 02 | then yy is the I/O SVC internal error codes and the error occurred during the reception of data from DNCS CI. |
| If < xx> = 03 | then yy is the I/O SVC internal error code and the error occurred during the writing of data to the output file. |
| If < xx> = DE | then yy is an internal error code associated with receiving data from the DNCS-IPC channel. The explanation of the error depends on the value of yy, as follows: |
| yy = 01 | indicates that no data was received. |
| yy = 02 | indicates that an internal control block is incorrect. |
| yy = 03 | indicates that an internal control for an output operation is incorrect. |
| yy = 04 | indicates that the data length received was greater than EMSCI can accept. |

User Action:

If the error code is 00yy, refer to Table A-1 for the appropriate action. Otherwise, retry the operation. If the error persists, verify that the system is correctly installed and patched. Check the patch listing files for errors. If you do not find errors and the problem persists, contact your customer representative. The *DNOS Messages and Codes Reference Manual* provides user actions for the I/O SVC internal error codes under error 00yy.

Table A-1. Emulator Status Codes

Code	Description
0051	DNCS-IPC session is not established for the specified station ID. See that your station ID is defined in the current DNCS configuration and that your station is active. Retry the operation.
0053	The DNCS nucleus cancelled the DNCS-IPC session, probably because DNCS has been terminated or because someone issued a DNCS CI Stop command for the station or its circuit. Use DNCS CI to restart the terminal.
0054	The specified station ID is not in the DNCS-IPC session table, and the DNCS nucleus is not active. See that the DNCS nucleus is active, and retry the operation.
0055	The specified station ID is already in use. Try activating the station with another valid station ID.
0056	DNCS-IPC buffer overflow has occurred. Contact your customer representative.
0057	No DNCS-IPC sessions are available. (All station IDs are in use.) Retry the operation later.
0059	The specified station ID is not in the DNCS-IPC session table, and the DNCS nucleus is active. You cannot activate the Emulator without a valid station ID. Retry the operation with a valid station ID.
00xx	For Emulator status codes that are in the range >0000 through >00FF, but are not listed in this table, refer to the internal I/O SVC error codes listed in the <i>DNOS Messages and Codes Reference Manual</i> .

Table A-1. Emulator Status Codes (Continued)

Code	Description
EE01	The Emulator has received an unsupported 3270 command. Inform your application administrator, who should see that the host application does not send 3270 commands other than Write, Erase/Write, Read Modified, and Erase All Unprotected.
EE02	A link error occurred, indicating that the DNCS nucleus failed to respond with output to the Emulator within 30 seconds or that another error occurred while the Emulator obtained data from the DNCS nucleus. Check your DNCS generation files to verify that the DNCS modules have been linked without error and that the communications device service routine (DSR) has been correctly configured to support the Emulator.
EE03	An I/O error occurred during a read or write to the station. Activate the Emulator at another terminal to determine whether the problem is with the terminal or the Emulator.

Appendix B

DNCS Log Messages

B.1 INTRODUCTION

DNCS tasks use the DNCS log file for recording both normal and abnormal events. This appendix lists and describes the messages these tasks generate. The format of messages logged onto the DNCS log file is as follows:

(DNCSttff hhmm < message>)

where:

tt is the task number, explained as follows:

Number	Meaning
01	System Control Task (DNCSSCT)
02	Clock Task (DNCSCLOK)
03	Command Interpreter Task (DNCSCI)
05	Physical Device Control Task (DNCSPDCT)
06	SNA Path Control Task (DNCSPC)
07	SNA Device Control Task (DNCSDC)
08	Network Access Protocol Task (DNCSNAP)
09	Terminal Services Routine (DNCSTSR)
11	Transport Task (DNCSTRP)
12	Network Interface Adapter Task (DNCSNIA)
14	Interface to NAP Task (DNCSINAP)

ff is the message format number.

hhmm is the 24-hour clock time (in hours and minutes).

< message> is the message preceded by one of the following error message severity codes: I, W, E, or S (Information, warning, error, or system, respectively.)

A set of common subroutines, which any DNCS task can use, also issues error messages. These messages are described at the end of this section (DNCStt81, for example). The tt is replaced by the number of the DNCS task calling the subroutine. The last two digits are in the range of 77 through 99, ensuring that the message number is unique.

A message is usually written to the terminal initiating the action that encountered the error. Appendix A describes terminal messages encountered while using DNCS CI. Other messages reported to terminals are described in the manuals for the package that you were using at the time of the error. DNCS messages with E (error) or S (system error) are always logged; messages with W (warning) or I (informative) are not logged unless the trace facility is enabled. The trace facility is a diagnostic tool for systems analysts.

When the DNCS0804 messages are displayed, DNCSNAP becomes inoperative, but the remaining DNCS functions can still be used. To restore DNCSNAP operations, terminate DNCS using the TDNCS operator command, then start it using XDNCS.

B.2 DNCS LOG MESSAGES

DNCS0101 hhmm E WQ DEST TASK NOT IN RQ STATE

Explanation:

The destination process for a DNCS request was not in the correct state (Read Queue) to accept the request. The request was ignored.

User Action:

Terminate and restart DNCS. If the problem persists, contact your customer representative to determine the origin of the request.

DNCS0102 hhmm I TASK aaaaaaaaa STARTED, TQRB bb XID: cccc

Explanation:

The DNCS task aaaaaaaaa was bid from the DNCS program file; bb is the index number of the task queue request block (TQRB), and cccc is the execution ID (XID) of the task.

User Action:

None is required.

DNCS0103 hhmm I SCT INITIALIZATION COMPLETE

Explanation:

The system control task has completed DNCS initialization.

User Action:

None is required.

DNCS0104 hhmm S QUEUE FULL RB: aabb cccc dddd eeee ffff

Explanation:

An internal DNCS queue structure has overflowed. The request block following RB: has not been queued.

User Action:

Resubmit request or begin session recovery procedures. Ensure that no data has been lost. If this message occurs frequently, contact your customer representative.

DNCS0105 hhmm E PATH NOT COMPLETE RB: aabb cccc dddd eeee ffff

Explanation:

The destination of the sequence ID (SID) specified in the request block (RB) represented by aabb...ffff is not valid. The operation could not be performed.

User Action:

Check the DNCS generation input parameters for errors.

DNCS0106 hhmm E SID NOT VALID

Explanation:

A sequence ID (SID) in a request block is not defined.

User Action:

Check the DNCS generation input parameters for errors.

DNCS0107 hhmm S TIMER QUEUE FULL

Explanation:

The queue for timer request events is full.

User Action:

If the problem persists, contact your customer representative to determine why all timer queue entries are being used.

DNCS0108 hhmm E INVALID RB OP-CODE — FATAL ERROR

Explanation:

An unknown request block (RB) operation code was received by the system control task (DNCSST). (Message DNCS0109 displays the RB in error.) DNCSST has gone to end-action processing.

User Action:

Terminate and restart DNCS. Contact the system operator or your customer representative if the problem persists.

DNCS0109 hhmm I RB IN ERROR: aabb cccc dddd eeee ffff : TID = tt

Explanation:

The request block (RB) referenced by message DNCS0108 is displayed for use in determining the cause of the error; tt is the DNCS task ID index.

User Action:

None is required, refer to message DNCS0108.

DNCS0110 hhmm E CREATE SEGMENT SVC ERROR. CC aaaa

Explanation:

An error was received from the operating system during the creation of the DNCS memory buffer segments; aaaa is the DNOS Segmentation SVC operation and completion code.

User Action:

Terminate DNCS and retry DNCS execution. Refer to the DNOS *DNOS Messages and Codes Reference Manual* for an explanation of the completion code.

DNCS0111 hhmm I HIGHEST PATCH # IN DCSxxx IS aaaa

Explanation:

The highest patch number found in the patch file DCSxxx is aaaa.

User Action:

None is required.

DNCS0112 hhmm E ERROR OCCURRED WHILE PATCHING DCSxxx

Explanation:

An error exists in patch file DCSxxx.

User Action:

Examine the patch listing files, determine why the patches did not apply, fix the problem(s), and rerun the patch batch stream. Contact your customer representative if all else fails.

DNCS0113 hhmm E DNCS INITIALIZATION ABORTED

Explanation:

This is a fatal error. Refer to the previous messages in the log for the cause.

User Action:

Determine error cause, take indicated action, and restart DNCS initialization.

DNCS0301 hhmm I RB LOG aabb cccc dddd eeee ffff

Explanation:

aabb...ffff is the request block (RB) that is being processed by DNCS CI.

User Action:

None is required (informative trace message).

DNCS0302 hhmm E RB ERR aabb cccc dddd eeee ffff

Explanation:

aabb...ffff is a request block (RB) that cannot be processed by DNCS CI due to an invalid operation code (aa) or an invalid sequence ID (SID) (dddd).

User Action:

Contact your system operator or customer representative to determine the error received. Check the DNCS generation parameters to ensure that all data was entered correctly.

DNCS0303 hhmm I RCVREQ DVC:aa RH = bbbb "RESPONSE" "BRACKET" RCVCHN = c

Explanation:

A request has been received from DNCS for device aa with an SNA request header (RH) of bbbb and a chain state of c.

"RESPONSE" can have the value of POSRSP, CHAIN, PROTO, CONTEN, BKTREJ, BREAK, CANCEL, CONTRL, INTRQD, EUBUSY, or EUDISC.

"BRACKET" can have the value of BETB, RCVB, SNDB, or CNTN.

User Action:

None is required (normal status message).

DNCS0304 hhmm E RCVREQ DVC:aa RH = bbbb "RESPONSE" "BRACKET" RCVCHN = c

Explanation:

A request has been received from device aa, but it did not result in an acceptable SNA response. The SNA request header (RH) is bbbb, and the chain state is c.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

Contact your customer representative or SNA host administrator to determine the nature of the error from the RH, "RESPONSE", and "BRACKET" values.

DNCS0305 hhmm I SNDRSP DVC:aa RH = bbbb "RESPONSE" "BRACKET" RCVCHN = c

Explanation:

A response has been sent to a request. The device number is aa, the SNA response header (RH) is bbbb, and the chain state is c.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

None is required (normal status message).

DNCS0306 hhmm E SNDRSP DVC: aa RH = bbbb "RESPONSE" "BRACKET" RCVCHN = c

Explanation:

A negative response has been sent to a request. The device number is aa, the SNA response header (RH) is bbbb, and the chain state is c. DNCS has reset the session in error.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

None is required unless the problem becomes frequent. If this happens, contact your customer representative or SNA host administrator to determine the nature of the error from the RH, "RESPONSE", and "BRACKET" values.

DNCS0307 hhmm I RCVRSP DVC:aa RH = bbbb "RESPONSE" "BRACKET" SNDCHN = c

Explanation:

A response for device aa with SNA response header (RH) bbbb and chain state of c. "RESPONSE" and "BRACKET" contents define the state of the response.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

None is required (normal status message).

DNCS0308 hhmm E RCVRSP DVC:aa RH = bbbb "RESPONSE" "BRACKET" SNDCHN = c

Explanation:

A negative SNA response has been received for device aa with an SNA response header (RH) of bbbb and chain state of c. "RESPONSE" and "BRACKET" contents define the state of the response received.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

Contact your SNA host administrator or customer service representative to determine the nature of the error from the RH, "RESPONSE", and "BRACKET" values.

DNCS0309 hhmm I SNDREQ DVC:aa RH = bbbb "RESPONSE" "BRACKET" SNDCHN = c

Explanation:

A request is being sent to the SNA host from device aa. The SNA request header (RH) is bbbb, and the request chain state is c.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

None is required (normal status message).

DNCS0310 hhmm E SNDREQ DVC:aa RH = bbbb "RESPONSE" "BRACKET" SNDCHN = c

Explanation:

A request is being sent to the SNA host from device aa. The SNA request header (RH) is bbbb, and the request chain state is c.

See message DNCS0303 for "RESPONSE" and "BRACKET" values.

User Action:

None is required.

DNCS0501 hhmm E RB OP INVALID

Explanation:

The DNCS physical device control task (PDCT) received a request with an operation code that was not defined in DNCS. The request was ignored.

User Action:

If the problem persists, contact your customer representative for help in determining the source of the invalid request.

DNCS0503 hhmm W COMM ERROR : FCNT = aaaa OPCC = bbcc BID = dddd PORT = ee
POLL = ffff

Explanation:

A communication interface error occurred. aaaa is the DNCS PDCT function processing the request, bb is the operation code, cc is the completion code, dddd is the buffer ID containing the request, ee is the resource ID being accessed, and ffff is the poll ID specified by the requestor. Operation and completion codes for the CP503 (FCCC) are described in the *Four Channel Communications Controller Installation and Operation Manual* Part Number 2263878-9701.

User Action:

Contact your customer representative. Contact your customer representative.

DNCS0504 hhmm I COMM REPR : FCNT = aaaa OPCC = bbcc BID = dddd PORT = ee POLL = ffff

Explanation:

This is a communications interface report. A read of a communications request block (CRB) was completed with a nonzero completion code. aaaa is the DNCS PDCT function processing the request, bb is the operation code, cc is the completion code, dddd is the buffer ID containing the request, ee is the resource ID being accessed, and ffff is the poll ID specified by the requestor. Operation and completion codes for the CP503 (FCCC) are described in the *Four Channel Communications Controller Installation and Operation Manual*.

User Action:

No action is required unless messages indicating other error conditions accompany this one.

DNCS0505 hhmm I COMM TRACE : FCNT = aaaa OPCC = bbcc BID = dddd PORT = ee POLL = ffff

Explanation:

This is a trace of an operation transferred to the communications interface. aaaa is the DNCS PDCT function processing the request, bb is the operation code, cc is the completion code, dddd is the buffer ID containing the request, ee is the resource ID being accessed, and ffff is the poll ID specified by the requestor.

User Action:

None is required (trace message).

DNCS0506 hhmm E PGM-FILE !INV FORMAT

Explanation:

The file accessed for downloading the CP503 four-channel communications controller (FCCC) board is not a program file.

User Action:

Examine the batch listing recorded as a result of starting DNCS to determine the access name of the program file assigned to LUNO > 30. This should be a program file that contains one of the following download data link controls:

- Link access protocol (LAP) — For X.25
- Local line control (LLC) — For 914As
- Synchronous data link control (SDLC) — For SNA host

If the download file does not contain the appropriate program, either modify the XDNCS procedure to reference the correct program file or install the required download program on the file. It may be necessary to reinstall the DNCS nucleus.

DNCS0508 hhmm E CODE NOT ON PGM-FILE

Explanation:

The link control discipline (LCD) code to be downloaded onto the CP503 four-channel communications controller (FCCC) board is not on the accessed program file.

User Action:

Examine the batch listing recorded as a result of starting DNCS to determine the access name of the program file assigned to LUNO > 30. This should be the program file < DNCS > .S\$DNCS.PGMTASK. If it is not, modify the XDNCS procedure to reference the correct program file. It may be necessary to reinstall the DNCS nucleus.

DNCS0509 hhmm W DVL-FILE INV FORMAT**Explanation:**

The file accessed to download the TI 914A terminal is not in a relative record file.

User Action:

You can ignore this message if 914A stations were not included in the configuration. Examine the batch listing recorded as a result of starting DNCS to determine the access name of the download file assigned to LUNO > 20, which should be a relative record file. You can either modify the XDNCS procedure to reference the correct download file or reinstall the 914A support. Contact your DNCS network operator.

DNCS0511 hhmm W CODE NOT ON DVL-FILE**Explanation:**

The file accessed to download the TI 914A terminal is not structured as expected by the download code.

User Action:

You can ignore this message if 914A stations were not included in the configuration. Examine the batch listing recorded as a result of starting DNCS to determine the access name of the load file assigned to LUNO > 20, which should be a relative record file. You can either modify the XDNCS procedure to reference the correct download file or reinstall the 914A support.

DNCS0512 hhmm W SVC iofcnt IOCC = aabb OPLU = ccdd FLAG = eeee RECN = ffff**Explanation:**

An SVC I/O operation (aa, sub-opcode cc) returned with error bb. The file LUNO referenced is dd, the record number is ffff, and the SVC flags are eeee. The substituted value for iofcnt determines the process issuing the SVC.

iofcnt is FCCC-OPN, DVL-FILE, PGM-FILE, CRB-READ, CRB-WRIT, FC3-LOAD, FC3-BLWP, PORT-OPN, or DEV-OPN.

User Action:

Consult the *DNOS Messages and Codes Reference Manual* to determine the action to be taken for internal error aabb.

DNCS0513 hhmm W COMM RQEST : FCNT = aaaa OPCC = bbbb BID = cccc PORT = dd POLL = eeee**Explanation:**

The communications request block (CRB) was issued. aaaa is the DNCSPDCT function issuing the request, bbbb is the completion code, cccc is the buffer ID containing the request, dd is the resource ID being accessed, and eeee is the poll ID specified by the requestor.

User Action:

Contact your customer representative.

DNCS0514 hhmm E MAXREADS ON CIRCUIT aa REDUCED TO bb

Explanation:

Due to buffer segment size limitations, your configuration cannot maintain the number of outstanding reads on circuit aa that was specified during DNCS system generation. Consequently, DNCS reduces the number of outstanding reads to bb.

User Action:

No immediate action is required. However, the next time you regenerate your DNCS configuration, specify no more than bb maximum reads for this circuit.

DNCS0601 hhmm I PU aaaaa CALL ANSWERED

Explanation:

DNCS has answered a call to physical unit (PU) aaaaa. aaaaa is the link sequence identifier (SID) of the PU.

User Action:

None is required.

DNCS0602 hhmm E INVALID RB. OP = aaaa SID = bbbb P1 = cccc

Explanation:

The SNA path control task received an invalid request block (RB). aaaa...cccc is a dump of the RB.

User Action:

If the problem persists, contact your customer representative for help in determining the source of the invalid requests.

DNCS0603 hhmm I LNK RB OP = aaaa SID = bbbb P1 F = cc PU@ dddd

Explanation:

The data link to device routine has been entered. aaaa is the requested operation code, bbbb is the sequence ID (SID), cc is the function code contained in the parameters word, and dddd is the index to the physical unit (PU).

User Action:

None is required.

DNCS0604 hhmm I DEV RB OP = aaaa SID = bbbb P1 RID = ccc PU@ dddd

Explanation:

The device to line routine has been entered. aaaa is the requested operation code, bbbb is the sequence ID (SID), ccc is the device resource ID index contained in the parameters word, and dddd is the index to the physical unit (PU).

User Action:

None is required.

DNCS0606 hhmm W PUaaaaa IS INACTIVE. DATE TIME yyddd hhmm

Explanation:

Physical unit (PU) aaaaa has changed from active to inactive state.

User Action:

None is required.

DNCS0607 hhmm I PUaaaaa IS ACTIVE. DATE TIME yyddd hhmm

Explanation:

Physical unit (PU) aaaaa has changed from inactive to active state.

User Action:

None is required.

DNCS0608 hhmm W PUaaaaa IS CLEARED. DATE TIME yyddd hhmm

Explanation:

The switched circuit to physical unit (PU) aaaaa has been cleared.

User Action:

None is required.

DNCS0701 hhmm SNA SLU REQ: DEV = aaa PATH = bbbb RH = cccc dddd eeee

Explanation:

An SNA request has been generated to be sent to a primary logical unit (LU). aaa is the device ID, bbbb is the ID of the application and central processing unit (CPU), and cccc...eeee is the SNA request header (RH).

User Action:

None is required.

DNCS0702 hhmm SNA SLU RSP: DEV = aaa PATH = bbbb RH = ccccddeeeee SENSE = ffff

Explanation:

An SNA request received from a primary logical unit (PLU) has been given a response. aaa is the device ID, bbbb is the ID of the application and CPU, cccc...eeee is the generated SNA response header (RH), and ffff indicates the type of response.

User Action:

None is required.

DNCS0703 hhmm SNA SLU RSP: DEV = aaa PATH = bbbb RH = ccccddeeeee SENSE: ffff

Explanation:

An SNA request received from a secondary logical unit (SLU) has been given an exception response due to internal state violations. aaa is the device ID, bbbb is the ID of the application and CPU, cccc...eeee is the SNA request header (RH), and ffff is the SNA sense code.

User Action:

None is required.

DNCS0704 hhmm SNA PLU REQ: DEV = aaa PATH = bbbb INVALID-ILLEGAL RH...IGNORED

Explanation:

An illegal request header (RH) was received and ignored. aaa is the device ID, and bbbb is the ID of the CPU and application.

User Action:

Contact your customer representative or SNA host administrator.

DNCS0803 hhmm NAP STARTED

Explanation:

X.25 packet level is started.

User Action:

None is required.

DNCS0803 hhmm CIFCN3/4 ERROR: LINK ADDRESS UNKNOWN

Explanation:

An operator command specified a network subscription address not defined in the DNCS generation.

User Action:

Reenter the command with a valid DTE address.

DNCS0803 hhmm CIFCN4 ERROR: VC NUMBER UNKNOWN

Explanation:

An operator command specified a virtual circuit (VC) number not defined in the DNCS generation.

User Action:

Reenter the command with a valid VC number.

DNCS0803 hhmm RECEIVED PACKET IN ERROR

Explanation:

A packet received from the network has an invalid format. The packet is discarded. The most frequent format error is an invalid virtual circuit (VC) number.

User Action:

Make sure the virtual circuits (VCs) generated in DNCS are consistent with the network subscription. If they are not, modify DNCS generation according to the network subscription. If they are, a malfunction of the network node is probable. Ask the network operating agency (NOA) to monitor the data sent by the network. If no error can be found, report the problem to your customer representative.

DNCS0803 hhmm PACKET RECEIVED IN WRONG LINK STATE

Explanation:

A data packet has been received before the initial restart procedure has been completed. The packet is discarded.

User Action:

None is required.

DNCS0804 NOTE

When the DNCS0804 messages are displayed, DNCSNAP becomes inoperative, but the remaining DNCS functions can still be used. To restore DNCSNAP operations, terminate DNCS using the TDNCS operator command; then start it using XDNCS.

DNCS0804 hhmm NAP FATAL ERROR: CEPMGR AUTOMATON ERROR

Explanation:

Internal DNCS problem.

User Action:

Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: DRESET AUTOMATA ERROR

Explanation:

Internal DNCS problem.

User Action:

Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: INCORRECT PACKET LENGTH

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: INTERNAL ACKED PACKET IN ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: LNKMGR AUTOMATA ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: NO BUFFER AVAILABLE

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: NOT ENOUGH CONNECTION END-POINTS

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: OPERATOR COMMAND INTERNAL ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: REMOTE ADDRESS ERROR (PVC ONLY)

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: ROUTINES INTERNAL ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: SEND ROUTINE INTERNAL ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: SRDATA AUTOMATA ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: TOO MANY VIRTUAL CIRCUITS DESCRIBED

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: TRPDAT ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: UNKNOWN RB CODE

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: UNKNOWN RB.P1 SUB-OPCODE

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: UNKNOWN RB.P2 SUB OP-CODE

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: UNKNOWN UPPER LAYER TASK

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0804 hhmm NAP FATAL ERROR: VCMGR AUTOMATON ERROR

Explanation:
Internal DNCS problem.

User Action:
Report the problem to your customer representative.

DNCS0807 hhmm VIRTUAL CIRCUIT state TYPE: type

DNCS0805 hhmm VC: nnnn LINE: mm VCTYPE: tt FLG: ffff ST: ss ADRL: bb

DNCS0806 hhmm ADDR: ddddddddddddddd CAUSE: cc DIAG: gg

Explanation:

This set of three messages appears each time a virtual circuit (VC) changes its state. The variables have the following meanings:

Variable	Description								
state	New state of the VC: OPEN, CLOSED, RESET.								
type	Type of VC: PVC Permanent VC. S – O Send only. Only outgoing calls are possible (switched VC). R – O Receive only. Only incoming calls are possible (switched VC). B – W Both ways. Both incoming and outgoing calls are possible (switched VC).								
VC	Virtual circuit number.								
LINE	Relative data terminal equipment (DTE) number in the DNCS generation, starting from 0.								
VCTYPE	Encoded virtual circuit type: <table border="0" style="margin-left: 100px;"> <tr> <td style="text-align: center;">0</td> <td>PVC</td> </tr> <tr> <td style="text-align: center;">1</td> <td>R – O</td> </tr> <tr> <td style="text-align: center;">2</td> <td>B – W</td> </tr> <tr> <td style="text-align: center;">3</td> <td>S – O</td> </tr> </table>	0	PVC	1	R – O	2	B – W	3	S – O
0	PVC								
1	R – O								
2	B – W								
3	S – O								
FLG	Reserved for internal TI usage only.								
ST	Encoded virtual circuit state: <table border="0" style="margin-left: 100px;"> <tr> <td style="text-align: center;">0</td> <td>Closed</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Opened</td> </tr> </table>	0	Closed	3	Opened				
0	Closed								
3	Opened								
ADRL	Length of the remote address.								
ADDR	Remote address.								
CAUSE	Cause field conveyed in the clear or reset packet. Cause encoding is defined in Table B-1 and is standardized by Recommendation X.25. Some networks may use extra cause codes. Refer to your network technical documentation.								

DIAG Diagnostic field conveyed in the clear or reset packet. Diagnostic encoding is network-dependent; refer to your network technical documentation. DNCS uses its own diagnostic code associated with cause 00: they are described in Table B-2.

User Action:
None is required.

Table B-1. Coding of the Cause Field

Cause	Code
Coding of Clearing cause field in clear indication packet:	
DTE originated	00, 02
Number busy	01
Out of order	09
Remote procedure error	11
Reverse charging acceptance not subscribed ¹	19
Incompatible destination	21
Fast select acceptance not subscribed ¹	29
Invalid facility request	03
Access barred	0B
Local procedure error	13
Network congestion	05
Not obtainable	0D
RPOA out of order ¹	15
Coding of Resetting cause field in reset indication packet:	
DTE originated	00
Out of order ²	01
Remote procedure error	03
Local procedure error	05
Network congestion	07
Remote DTE operational ²	09
Network operational ²	0F
Incompatible destination	11
Notes:	
¹ May be received only if the corresponding optional user facility is used.	
² Applicable to permanent VCs only.	

Table B-2. Coding of the Diagnostic Field

Cause	Code
Diagnostic field in DTE-generated clear packets:	
Clear on operator request.	00
Physical circuit out of order.	01
No Connection-End-Point available with level 4.	02
Modulo value in packet is incompatible with subscription parameters.	03
Upper layer task ID is invalid.	04
Virtual circuits flags mismatching; service not supported.	09
Diagnostic field in DTE-generated reset packets:	
Flow Control error.	05
Bit M is not supported.	07
Switched virtual circuit cleared upon receipt of a restart packet.	0D

DNCS0901 hhmm I aabb ENTRY TRACE**Explanation:**

A subroutine aa within the terminal service routine (TSR) has been entered.

User Action:

None is required (trace message).

DNCS0903 hhmm I aabb SNA BIND REJECTED**Explanation:**

Terminal service routine (TSR) subroutine aa detected an SNA BIND reject while attempting to activate a logical unit (LU).

User Action:

None is required. A message also appears at the terminal attempting the session.

DNCS0904 hhmm I aabb SNA SC REJECTED**Explanation:**

The INITLU subroutine detected an error during the logical unit (LU) session initialization process. The session was not established.

User Action:

None is required. A message also appears at the terminal attempting the session.

DNCS0905 hhmm I aabb DISCARDED BUFFER

Explanation:

Terminal service routine (TSR) subroutine aa has completed a request and discarded a buffer.

User Action:

None is required (trace message).

DNCS0906 hhmm I aabb SYNONYM FOUND

Explanation:

The terminal service routine (TSR) subroutine MAPSYN successfully mapped a synonym to an application name during session establishment.

User Action:

None is required (trace message).

DNCS0907 hhmm I aabb PU BLOCK FOUND

Explanation:

Subroutine aa found a physical unit (PU) control block during the mapping of the session path index or session path name to path control blocks.

User Action:

None is required (trace message).

DNCS0908 hhmm I aabb APPL BLOCK FOUND

Explanation:

Subroutine aa found an application control block during the mapping of the session path index or session path name to path control blocks.

User Action:

None is required (trace message).

DNCS0920 hhmm E aabb RECEIVED INVALID OAF: cc

Explanation:

The terminal service routine (TSR) received an invalid origination address field (OAF) identification cc. The request was ignored.

User Action:

If the problem persists, contact your customer representative.

DPCS0921 hhmm E aabb MSG BUILD ERROR, TABLE ADR:cccc MSG ID:dd

Explanation:

The terminal service routine (TSR) subroutine BLDMSG was unable to create the terminal display message dd.

User Action:

To determine the message that should have been created, consult Appendix A for SNA display station message DNCS09dd.

DNCS0922 hhmm I aabb SNA RH/RU: cccccc

Explanation:

Terminal service routine (TSR) subroutine aa received and processed an SNA request header (RH) and request unit (RU).

User Action:

None is required (trace message).

DNCS0923 hhmm I aabb LU BLOCK: cccccccc

Explanation:

The terminal service routine (TSR) subroutine aa processed the logical unit (LU) state block cccccccc.

User Action:

None is required (trace message).

DNCS1103 hhmm TRANSPORT STARTED

Explanation:

The transport function is started.

User Action:

None is required.

DNCS1103 hhmm INVALID REQUEST

Explanation:

Internal DNCS problem.

User Action:

Report the problem to your customer representative.

DNCS1103 hhmm ACK RECEIVED OUT OF WINDOW

Explanation:

Internal DNCS problem.

User Action:

Report the problem to your customer representative.

DNCS1103 hhmm NO SITE KNOWN FOR PERMANENT VIRTUAL CIRCUIT

Explanation:

A site, corresponding to the address of the remote data terminal equipment (DTE), must be defined for each permanent VC defined in the DNCS generation.

User Action:

Modify the DNCS system generation to define a site for each permanent VC defined in the DNCS generation.

DNCS1104 hhmm TRP FATAL ERROR: xxxx

Explanation:

Internal error xxxx has caused the transport function to become inoperative.

User Action:

Report the problem to your customer representative. To restore the transport function operation, terminate DNCS using the operator command TDNCS, and restart it using the operator command XDNCS.

DNCS1405 hhmm E INAP FATAL ERROR: UNEXPECTED EVENT

Explanation:

INAP encountered an unexpected condition.

User Action:

Contact your customer representative.

DNCS1405 hhmm E INAP FATAL ERROR: UNEXPECTED REQUEST BLOCK OPCODE

Explanation:

INAP received a request indicating a DNCS operation not expected by INAP.

User Action:

Contact your customer representative.

DNCS1405 hhmm E INAP FATAL ERROR: UNEXPECTED SID

Explanation:

INAP encountered an unexpected session ID. Possible DNCS system generation inconsistency.

User Action:

Review DNCS system generation configuration for inconsistencies. Contact your customer representative.

DNCS1406 hhmm W INAP DISCARDED PACKET: CALL REQUEST WITH UNKNOWN ROUTING

Explanation:

INAP discarded a call request packet from NAP because imbedded routing codes in the call request user data field indicated a non-existent NIO task.

User Action:

The probable cause is that a NIO task such as DNIO has not started. Start the NIO tasks used in your installation. The call must be redone at the remote site by the remote NIO task. It is also possible that a non-NIO application is attempting to contact your site.

DNCS1406 hhmm W INAP DISCARDED PACKET: REVERSE CHARGE NOT ACCEPTED

Explanation:

INAP has discarded a call which indicated reverse charging because the site entry did not indicate accepting reverse-charged calls.

User Action:

Modify the site entry to accept future reverse-charged calls or ignore the warning.

DNCS1406 hhmm W INAP DISCARDED PACKET: TIMEOUT ON WRITING PACKET UPWARD

Explanation:

INAP discarded a packet from NAP, which was sent to an NIO task. The packet is discarded because the operation of writing the packet upward has timed out.

User Action:

The probable cause is that the NIO task such as DNIO terminated. Restart the NIO task. If communication from INAP to the NIO task still generates errors, terminate and restart both DNCS and the NIO task.

DNCS1406 hhmm W INAP DISCARDED PACKET: UNEXPECTED X25 PACKET TYPE

Explanation:

INAP has discarded an X.25 packet because the packet type is unexpected. This is due to protocol mishandling or the remnants of an incomplete call.

User Action:

If error persists, restart the appropriate NIO task such as DNIO.

DNCS1406 hhmm W INAP RESET VIRTUAL CIRCUIT NNN DUE TO TIMEOUT

Explanation:

INAP detected a timeout on packets written to the NIO task and closed the associated virtual channel.

User Action:

None is required for DNCS or INAP, but the action can have side effects in the NIO task such as DNIO. Check the log of the NIO task such as DNIO for messages. It may be necessary to stop and restart the NIO task.

DNCS1407 hhmm W INAP RESET CONNECTION nnn DIAG = 17

Explanation:

INAP has detected timeout on packets written to an NIO task such as DNIO and has closed the connection to NAP.

User Action:

Restart the appropriate NIO task. This error may occur when DNCS starts before an NIO task does. The error then stops when an NIO task starts. Ignore such errors.

DNCS1407 hhmm W INAP RESET CONNECTION nnn DIAG = xx

Explanation:

INAP is unable to route packets upward due to the internal DNCS code xx.

User Action:

Restart the appropriate NIO task such as DNIO or DNCS. Examine the DNCS logs for related errors. If unable to determine the cause, contact your customer representative.

DNCS1408 hhmm W INAP CALL-BY-SITE ERR: DIAG = xx

Explanation:

INAP has cleared a call by DNIO because INAP is unable to find the specific site in the DNCS .S\$SIT file. Diagnostic codes are:

- DIAG = 32 SITE DOES NOT EXIST
- DIAG = 3B I/O ERROR ON .S\$SIT

User Action:

If DIAG = 32, use the DNCS command AROUTE to add a route with an associated site name which corresponds to the desired site. If DIAG = 3B, verify that .S\$SIT exists and perform normal checks on the KIF file .S\$SIT. If unable to determine the error cause, contact your customer representative.

DNCS1409 hhmm I INAP NIO CHANNEL xx OPENED

Explanation:

An NIO task such as DNIO has opened a channel to INAP.

User Action:

No user action necessary.

DNCS1409 hhmm I INAP NIO CHANNEL xx CLOSED

Explanation:

An NIO task such as DNIO has closed a channel to INAP.

User Action:

No user action necessary.

DNCS1410 hhmm W INAP PACKET RETURN: CONNECTION POINT NOT AVAILABLE

Explanation:

INAP has returned a call since an internal connection point is not available.

User Action:

Modify the DNCS system generation configuration to specify additional connection points or ignore the warning if additional concurrent connections are not desired.

DNCS1410 hhmm W INAP PACKET RETURN: NO VC OR VC NOT IN TRANSFER STATE

Explanation:

INAP returned a packet from an NIO task such as DNIO, which has sent a packet destined for a virtual circuit (VC) not in data transfer state. The VC may be in waiting call accept or other non-data transfer state.

User Action:

Examine the DNCS log for related messages from NAP and PDCT showing coincidental communication disconnects or errors. Examine the appropriate log from the NIO task to identify the reason why the NIO task was not aware that the X.25 link was disabled. A possible cause is restarting the NIO task after an abnormal task termination.

DNCS1410 hhmm W INAP PACKET RETURN: VIRTUAL CIRCUIT RESET

Explanation:

INAP returned a packet from an NIO task such as DNIO. The task has sent a packet destined for a virtual circuit that is now reset.

User Action:

Examine the DNCS log for related messages from NAP showing coincidental virtual circuit resets. Examine the appropriate log from the NIO task to identify the reason why the NIO task was not aware of the virtual circuit reset. A possible cause is restarting the NIO task after an abnormal task termination.

DNCS1410 hhmm W INAP PACKET RETURN: X.25 LINK NOT OPEN

Explanation:

INAP discarded a packet from an NIO task such as DNIO. The NIO task sent a packet destined for a virtual circuit assigned to a network X.25 link that is currently disabled.

User Action:

Examine the DNCS log for related messages from NAP showing coincidental communication disconnects or errors. Examine the appropriate log from the NIO task to identify the reason why the NIO task was not aware that the X.25 link was disabled. A possible cause is restarting the NIO task after an abnormal task termination.

NOTE

The remaining messages are from DNCS common subroutines. The tt is replaced by the number of the DNCS task calling the subroutine at the time of the error. See the description at the beginning of this section for the list of numbers that can replace tt and their associated task names.

DNCSst77 hhmm THE CURRENT DATE IS mm/dd/yy

Explanation:
DNCS date stamp.

User Action:
No action necessary.

DNCSst78 hhmm * * * * * END OF DNCSLOG * * * * *

Explanation:
End of DNCS Log.

User Action:
No action necessary.

DNCSst79 hhmm E JOINB: SEGMENT MISMATCH; BID = aaaa, CHAIN = bbbb

Explanation:
A request to append buffer aaaa to buffer chain bbbb failed because the buffers are not in the same memory segment.

User Action:
Contact your customer representative.

DNCSst80 hhmm E DNCSLOG FMT ERR — PROBABLE LOST MESSAGES

Explanation:
Data being processed for output to the DNCS log contains a format error. DNCS discards this data.

User Action:
Contact your customer representative.

DNCStt81 hhmm E CHGSEG: REQUESTED SEGID aaaa NOT = ACTUAL SEGID bbbb

Explanation:

The common subroutine that managed the DNOS memory segments used for DNCS buffers attempted to swap memory segments; however, the segment received was not the segment requested.

User Action:

Contact your customer representative. It may be necessary to force a crash dump in order to determine the cause of the error.

DNCStt82 hhmm E CHGSEG: SVC ERR aaaa

Explanation:

The common subroutine that managed the DNOS memory segments used for DNCS buffers received an error code from a DNOS Segmentation SVC. The SVC operation and error code was aaaa.

User Action:

Consult the *DNOS Messages and Codes Reference Manual* for the proper action for error aaaa.

DNCStt83 hhmm E CHGSEG: BAD SEG INDEX aaaa

Explanation:

The common subroutine that managed the DNOS memory segments used for DNCS buffers received an invalid segment index.

User Action:

Contact your customer representative. It may be necessary to force a crash dump in order to determine the cause of the error.

DNCStt84 hhmm E RELBID: INVALID BID: aaaa

Explanation:

The common subroutine that releases a memory buffer to the free buffer pool received an invalid buffer ID (BID), aaaa.

User Action:

None is required. (The operation is ignored.).

DNCStt85 hhmm W BQENQB: INVALID P1 aaaa

Explanation:

The common subroutine that enqueues a buffer onto a queue found an invalid queue structure. aaaa is the buffer ID (BID) of the first buffer on the queue.

User Action:

None is required.

DNCStt86 hhmm W BQLQB: INVALID P1 aaaa

Explanation:

The common subroutine that releases the top entry from a buffer queue found an invalid entry. aaaa is the buffer ID (BID) in error.

User Action:

None is required.

DNCStt87 hhmm W BQENQB: INVALID BID aaaa

Explanation:

The buffer enqueue common subroutine received an invalid buffer pointer. aaaa is the buffer ID (BID) passed to it.

User Action:

None is required.

DNCStt88 hhmm W BQDEQB: INVALID P1 aaaa

Explanation:

The buffer dequeue common subroutine received an invalid buffer pointer. aaaa is the buffer ID (BID) passed to it.

User Action:

None is required.

DNCStt89 hhmm E WRITEQ: INVALID OP: aaaa

Explanation:

The DNCS request routing subroutine received a request that did not have a valid operation code. aaaa is the operation code received. The request was ignored.

User Action:

If the problem persists, contact your customer representative for assistance in determining the cause and source of the invalid requests.

DNCStt90 hhmm I WRITEQ: OK aaaa bbbb

Explanation:

An internal DNCS request block (RB) has been entered on the request queue. aaaa is the RB operation code, and bbbb is the sequence ID (SID) of the request.

User Action:

None is required (trace message).

DNCStt91 hhmm S WRITEQ: RB QUEUE IS FULL aaaa bbbb

Explanation:

The DNCS request routing subroutine was unable to place a new request on the request queue because all entries were being used at the time. aaaaa is the request block (RB) operation code, and bbbbb is the sequence ID (SID) of the request.

User Action:

If the problem persists, contact your customer representative for information on how to obtain a system generated with more RB space.

DNCStt92 hhmm S WRITEQ: NO VALID DESTINATION aaaa bbbb

Explanation:

The DNCS request routing subroutine received a request that did not have a valid DNCS task destination as determined by mapping the sequence ID (SID) to a task destination. aaaa is the request block (RB) operation code, and bbbb is the SID of the request.

User Action:

Contact your customer representative.

DNCStt93 hhmm S TSKINT: TQRB NOT INIT

Explanation:

The DNCS task initialization process was called to initialize a task, but the task queue request block (TQRB) indicated that the task had already been initialized.

User Action:

Terminate DNCS and retry DNCS execution.

DNCStt94 hhmm S TSKINT: NO TQRB

Explanation:

The DNCS initialization process was called to initialize a task, but no task queue request block (TQRB) was provided.

User Action:

Terminate DNCS and retry DNCS execution. If the problem recurs, contact the network operator to determine if a new task has been added to the list of tasks without being declared during the generation of DNCS.

DNCStt95 hhmm S TSKINT: SCT NOT INIT

Explanation:

DNCS initialization was proceeding before the system control task was initialized.

User Action:

Terminate and restart DNCS. If the problem persists, it may be necessary to reinstall the DNCS nucleus.

DNCSStt96 hhmm E GETKEP: NO BID

Explanation:

The get character string routine was called to obtain data from a buffer, but the calling routine provided no buffer pointer. The operation was not performed.

User Action:

Check the DNCS Log for occurrences of the message DNCSStt99 E RSVBID: GET BUFFER FAILURE to determine if this is why no buffer was present. If this is not the case and the problem persists, contact your customer representative for assistance.

DNCSStt97 hhmm E INSKEP: NO BID

Explanation:

The insert character string routine was called to move a character string, but the calling routine provided no buffer pointer. The operation was not performed.

User Action:

Check the DNCS log for occurrences of the message DNCSStt99 E RSVBID: GET BUFFER FAILURE to determine if this is why no buffer was present. If this is not the case and the problem persists, contact your customer representative for assistance.

DNCSStt98 hhmm E INSKEP: NO ROOM IN BUFFER

Explanation:

The buffer that was provided to insert the requested character string, had insufficient space. The operation was not performed.

User Action:

If this problem persists, contact your customer representative for assistance.

DNCSStt99 hhmm E RSVBID: GET BUFFER FAILURE; L/C = aaaa, P = bbbb

Explanation:

An insufficient number of free buffers was available for a memory request, and the request was denied. The amount of space required is represented by bbbb. The priority of the request is represented by aaaa.

User Action:

None is required if this message appears infrequently since the calling routine will normally retry the memory request. If this message appears frequently, contact your customer representative for assistance.

Appendix C

Modifying DNCS SCI Commands

C.1 GENERAL INFORMATION

This appendix discusses the SCI commands for the DNCS nucleus and DNCS network. It describes the command logic and suggests some ways to tailor the standard command procedures to meet the needs of individual sites. The standard procedures do not require any modification to perform correctly in any environment. However, some sites may find it convenient to customize the daily procedures by doing any or all of the following:

- Streamlining Emulator activation procedures by eliminating or combining prompts
- Changing defaults and initial values for ease of use
- Enforcing site standards for files and devices
- Maintaining onsite security
- Obtaining usage statistics
- Conducting performance analyses
- Logging on to common applications
- Combining procedures that are always used together

Each of the following paragraphs discusses possible modifications to one of the DNCS procedures. Beginning with a brief account of the function and common use of the procedure, the paragraph explains its logic and the values it uses. Then, the discussion indicates ways to change the procedure, considering the effects and implications of each change with respect to the rest of DNCS. The procedures in this appendix are in the command library <CMD> that you entered when you installed DNCS during object installation. The following procedures are discussed:

Procedure	Function
XDNCS	Execute DNCS
TDNCS	Terminate DNCS
XCI	Activate the DNCS Command Interpreter
HOSTQST	Start Specific DNCS/SNA Host Queue Service
QHOST	Place Request on Specified Host Queue

These command procedures use synonyms that are dynamically assigned and released in the procedures DNCSASYN and DNCSDSYN.

NOTE

The modifications mentioned in this appendix are only suggestions. Any change made to a DNCS command procedure is the responsibility of the person making the change. For help in modifying SCI procedures, see the *DNOS SCI Reference Manual*.

C.2 XDNCS — EXECUTE DNCS

XDNCS activates the DNCS job. This is a prerequisite for the use of any of the other procedures described in this section. DNCS remains active until terminated with TDNCS. Access the <CMD>.XDNCS file to see the XDNCS procedure.

C.2.1 Logic of XDNCS

XDNCS begins by bidding a task to see if DNCS is already active. If it is, a message to that effect is issued, and no further action is taken. XDNCS then issues a prompt asking where you want the batch listing, and it displays an initial value. The procedure then creates a data stream, using a BATCH/EBATCH frame to avoid synonym conflicts. It assigns global logical names for the SVQ SCIQUE and the DNCS CI help files. Next it changes the name of the current DNCS log file from <DNCS>.\$SDNCS.LOG to <DNCS>.\$SDNCS.LOG1, in order to save it, and creates a new log file. Then it assigns LUNOs to the communications channels defined in the configuration, to the DNCS log, and to the DNCS program files. It then issues master reset commands and download commands to all CP503 (FCCC) channels defined in the configuration and issues master reset commands to CP501s (BCAIMs) in the configuration. If a disk-resident table is specified in the system generation, DNCS checks to see if the site file (.SS\$IT) is present. If it is not present, XDNCS executes ISF to create it. The data stream concludes by executing DNCSSCT to initialize all DNCS tasks. The procedure concludes by issuing an Execute Batch Job (XBJ) command to execute the data stream just created. The DNCS job executes in foreground with a priority of five. The DNCS job takes about two minutes to load, initialize, and reach idle state.

C.2.2 Changes to XDNCS

Depending on site standards, the following modifications to XDNCS might be worthwhile:

- Set a privilege level limiting the users who can issue the command to those with system operator status.
- Modify the privilege level on the DNCS job by changing the PRI = 5 item in the Execute Batch Job (XBJ) command. The result depends on the privilege levels assigned to other jobs competing with DNCS for operating system resources.
- Combine XDNCS with XPTR1 or XPTR3 to activate the printer station emulators at the same time as DNCS.
- Embed XDNCS in the batch procedure .SS\$IBTCH used to activate DNOS.
- Change the user ID of the DNCS job by modifying the XBJ command.
- Change the volume name of the DNCS system disk specified in the DNCSASYN command procedure.

C.3 TDNCS — TERMINATE DNCS

TDNCS deactivates the DNCS job and all its tasks. The system operator executes this procedure from a job other than DNCS. Access the < CMD> .TDNCS file to see the TDNCS procedure.

C.3.1 Logic of TDNCS

Before terminating DNCS, this procedure asks the user to confirm the operation by responding to the prompt ARE YOU SURE?. Unless the user replies YES (or Y), TDNCS displays the message DNCS NOT TERMINATED.

TDNCS uses the SCI command DNCSASYN to obtain the DNCS synonyms. Then, it bids the terminate task (DNCSSTOP) from the DNCS program directory (@DNCS.S\$DNCS.PGMTASK). The task verifies that the user is running as the system operator, and not running as the DNCS job, prior to killing the job. After the DNCS job is terminated, the procedure resets all communication devices used by DNCS. The procedure concludes by releasing the DNCS synonyms it used and writing a message to the DNOS system log.

C.3.2 Changes to TDNCS

The only recommended changes to TDNCS involve its use by the DNOS operator and the DNCS network operator, as follows:

- Raise the privilege level of the command to one appropriate to the network operator. As mentioned in the discussion of XDNCS, this should be at least two and perhaps a higher, site-defined level. For sites employing the standard DNOS privilege levels, this prevents a user with only access privileges (level 1) from issuing this command by mistake.
- Include commands to terminate any DNCS/SNA printer station emulators activated by a modified version of XDNCS.

C.4 XCI — EXECUTE DNCS COMMAND INTERPRETER

XCI activates the DNCS operator interface at a terminal. It enables the user to issue the DNCS CI commands described in Section 3. Access the < CMD> .XCI file to see the XCI procedure.

C.4.1 Logic of XCI

XCI issues the following prompts:

COMMAND?

Asks for a complete DNCS CI command. Section 3 provides a complete description of all DNCS CI commands.

LISTING ACCESS NAME

Asks for the access name of the destination for DNCS CI displays, defaulting to the station issuing the command.

The procedure continues by assigning a job-local LUNO to the terminal local file (TLF) `.S$FTLF@$ST`, where `@$ST` stands for the station ID of the terminal issuing the command. It defines the synonym TLF as the LUNO for the station. Then, it allocates another LUNO to the DNCS program directory and bids the EMSCI task, passing to it the parameters described in Table C-1. It concludes by releasing the LUNOs it assigned.

Table C-1. XCI Parameters

Parameter	Value	Description
1	1500	Stack size
2	0	Heap size
3	0	Trace file LUNO
4	@TLF	Output file LUNO
5	0	Station ID
6	0	LUNO of terminal where the command is entered
7	@\$CICHNL	DNCS CI slave channel
8	&COMMAND	DNCS command

C.4.2 Changes to XCI

Since XCI provides the primary operator interface to DNCS CI commands, you can modify this procedure in a number of useful ways, as follows:

- Raise the privilege level required to issue the command, limiting access to the system operator, network manager, and others involved in the configuration of the system. Since DNCS CI commands permit the dynamic reconfiguration of the network, they should not be used without a thorough understanding of the implications of the change.
- Write additional command procedures to issue the most frequently used DNCS commands automatically. This reduces the number of keystrokes required to enter the commands. To do this, include the command you want in place of `&COMMAND` in the parameter list. This is the way the network procedures are implemented. Look over the network SCI procedures described in Section 2 for examples of this technique.

C.5 HOSTQST (START HOST QUEUE SERVICE) COMMAND

The HOSTQST command procedure supplied with DNCS service queue (SVQ) starts the SVQ queue server task for any host application available on your system. For frequently used applications, you can copy HOSTQST and customize the copy for your environment.

C.5.1 Logic of HOSTQST

HOSTQST prompts for variable data, depending on the application. The user-supplied responses to the prompts are then assigned as the values of HOSTQST synonyms. HOSTQST uses the SCI primitive .DATA and replaces the synonyms in the data file with the user responses to build a control file for the host queue server task. Associated trace files and batch job names are then set up according to the queue number being used. The batch job, which HOSTQST starts, assigns a LUNO to the .DATA control file; thus, each host queue server task is unique, according to its queue number and control file.

C.5.2 Changes to HOSTQST

For each application, responses to the HOSTQST prompts are identical every time the application is started. To change HOSTQST, you simply edit the procedure and replace the variables filled in by the prompt responses with the constants associated with your application. The HOSTQST command description example (paragraph 5.7) uses the Information Management System (IMS) application, forming the basis for the custom procedure shown in Figure C-1. This command procedure was created by editing a copy of HOSTQST in the following manner:

1. Rename the procedure to associate it with the application.
2. Delete all prompts.
3. Delete all synonyms filled in by the values of the prompt responses, except the synonym Q, which is literally assigned the value of its applicable queue number due to its numerous occurrences throughout the procedure.
4. In the queue server task control file (.DATA), substitute the synonyms containing the poll address, termination ID, queue number, application log-on/password, and host-connected message with the actual inputs. These are the constants associated with your application.

C.6 QHOST (PLACE REQUEST ON SPECIFIED HOST QUEUE) COMMAND

The QHOST command procedure supplied with DNCS SVQ enters host application commands through SVQ. For frequently used applications or to maintain security, you can copy QHOST and customize the copy to control queue access or to limit the options available, according to your environment.

C.6.1 Logic of QHOST

QHOST prompts for a queue number in the range of 4 through 15. This number is assigned to the synonym Q. Responses to the remaining prompts are sent by QHOST through parameters specified in the SCI primitive .BID which executes task SVQQUE.

```

IMSQST(START IMS QUEUE SERVICE)=6
DNCSASYN
.SYN SVQ=@DNCS.S$DNCS.SVQ
.SYN Q='4'
.BID T=SJSSTS, UTIL, P=(300,500,N,N,SVQHOST,,SVQHST@Q,DUMY)
.IF @$$CC, EQ, 0
    MSG T = 'SVQHST@Q ALREADY ACTIVE, NOT RESTARTED'
    .EXIT
.ENDIF
.BID T=SJSSTS, UTIL, P=(300,500,N,N,SYSTEM,,DNCS,DUMY)
.IF @$$CC, NE, 0
    MSG TEXT =
    'DNCS SERVICE INACTIVE--XDNCS COMMAND MUST PRECEDE QUEUE SERVICE START'
    .EXIT
.ENDIF
.DATA @SVQ.SVQHST@Q, SUBSTITUTION = YES
066                ! POLL ADDRESS
066                ! TERMINATION ID
>00                ! LUNO ID OF LOGGING

@$$EMCHNL          ! IPC CHANNEL
@SVQ.HOSTR4        ! TRACE FILE
4                  ! QUEUE NUMBER
IMS PASSWORD       ! APPLICATION LOGON/PASSWORD
TERMINAL CONNECTED ! HOST CONNECTED MESSAGE
.EOD
AF INPT=SVQ.HOSTR@Q, OUTP=SVQ.ARCHIV@Q
.IF @$$CC, NE, 0
    .IF @$$MN, EQ, 0030
        MFN OLDP=SVQ.ARCHIV@Q, NEWP=SVQ.OLDARC@Q, REPL=YES
        CFREL PATH=SVQ.ARCHIV@Q, INIT=1000, SECD=0, EXPD=NO
        AF INPT=SVQ.HOSTR@Q, OUTP=SVQ.ARCHIV@Q
        .IF @$$CC, NE, 0
            MSG T='PREVIOUS HOST@Q TRACE FILE NOT SAVED'
        .ENDIF
    .ELSE
        CFREL PATH=SVQ.ARCHIV@Q, INIT=1000, SECD=0, EXPD=NO
        MSG T='PREVIOUS HOST@Q TRACE FILE NOT SAVED'
    .ENDIF
.ENDIF
DF PATH=SVQ.HOSTR@Q
CFREL PATH=SVQ.HOSTR@Q
.SYN $TRF$='SVQ.SVQHST@Q'
.SYN $$MSG$$=@ME
XBJ JOB=SVQHST@Q, USEC=N, PRIO=12, BACK=N, DISP=N,
    INPT=SVQ.HOSTQSTB, LIST=SVQ.HOSTQSTL, USER=SVQHOST, PASS=' '
.IF @$$CC, EQ, 0
    MSG T = 'START SUCCESSFUL FOR HOST@Q QUEUE SERVICE TASK'
.ELSE
    MSG T='HOST@Q QUEUE SERVICE START FAILED'
.ENDIF
DNCSDSYN
.SYN DC$PA=' ', $$MSG$$=' ', Q=' ', LOGON=' ', PSW=' ', CON=' ', SVQ=' '

```

Figure C-1. HOSTQST Command Procedure Modified for IMS Application

C.6.2 Changes to QHOST

For each specific application, the command name and the queue number would typically be the only unique characteristics to change. However, in some applications you could enforce a constant prompt response, denying users a choice. To change QHOST, you simply edit the procedure and replace variables determined by prompt responses with any constant you wish to enforce.

For example, assume you have confidential commands that should never be listed in the trace file; delete the LIST INPUT IN TRACE FILE? prompt and replace the string `<,&L,>` in the .BID parameters with `<,&NO,>`. You can also edit the .DATA command section that creates a file, recording all responses from the most recent execution of QHOST (this file is used for troubleshooting). At your discretion, you can delete or further modify this trace file according to your needs, since it does not affect the operation of QHOST.

In addition to providing time-delayed execution, QHOST also allows immediate execution from your terminal without requiring you to log on in order to establish a session. Using QHOST in this fast input mode requires showing the trace file to view the host reply. For ease of implementation, an optional show instruction is included in QHOST near the end of the procedure and can be activated by deleting the asterisk in column one.

Another powerful feature in SVQ is the capability of transmitting text files to host applications. Files edited on your TI computer are easily sent with QHOST's file pathname input. For example, on distributed computing networks supporting station-to-station message correspondence, you can use QHOST to submit memorandums, messages, or other text files to your electronic mail facility. To simplify user inputs, customize a copy of QHOST, leaving one prompt for pathname input. Also, modify the .BID to enforce the following defaults: zero time delay, do not list input in trace file, and do not delete file. The custom procedure shown in Figure C-2 was created for this purpose by editing a copy of QHOST in the following manner:

1. Rename the procedure to associate it with the application.
2. Delete all prompts except FILE PATHNAME OR COMMAND; then rename it FILE PATHNAME.
3. Modify the synonym Q to literally assign the value of its applicable queue number.
4. Delete lines or use asterisks to bypass SCI code used to process the FILE PATHNAME OR COMMAND response; all inputs will be files.
5. In the verify pathname .SVC, replace `<"@QCMD">` with `<"@&FP">`.
6. In the following .BID parameters for SVQQUE task, replace `<&TD,&TT>` with `<0,0>` and replace `<&DEL,&L,@FPS,"@QCMD">` with `<N,N,1,@&FP>`.
7. Delete the asterisk preceding .SHOW to automatically display the host reply.
8. Optionally delete the .DATA/.EOD block which creates the troubleshooting trace file.

DNCS Glossary

The terms defined in this glossary describe the structure and operation of DNCS. All members of the DNCS family of manuals contain some of these terms; however, the terms in this glossary do not attempt to duplicate all the terms found in the glossaries of the *DNOS DNCS X.25 Remote File Transfer (RFT) User's Guide* and the *DNOS Concepts and Facilities* manual.

Access Method — A data management technique in a computer that is available to the user for transferring data between the main storage and the input/output (I/O) devices. In DNCS, the term refers to the method used to access the SNA host computer, either by Virtual Telecommunication Access Method (VTAM) or packet-switching network (PSN).

ACF — See Advanced Communications Function.

ACU — See Automatic Calling Unit.

Advanced Communications Function (ACF) — An IBM System/370 software product. ACF implementation provides access to resources of multiple computer systems, some or all of which may be geographically remote.

Alternate Route — A secondary path used to reach a destination if the primary path is unavailable.

Application Program — In a communications environment, such as SNA, one of several programs to which you can attach a terminal through DNCS: IMS, TSO, CICS, and so on.

ARM — See Asynchronous Response Mode.

Asynchronous Mode — A mode of data transmission over a communications channel in which the receiving device is not dependent on the time relationship of the sending device. Start and stop bits frame each character to maintain necessary control of timing.

Asynchronous Response Mode (ARM) — A transmission mode of high-level data link control (HDLC) in which the secondary station transmits independently of the operation of the primary station. See also Normal Response Mode.

Attribute — A characteristic of a field of IBM 3278 Display Station formatted data that determines whether it permits data entry, accepts only numeric data, appears on displays, and/or becomes modified by the operator.

Attribute Character — A character preceding a field of IBM 3278 Display Station formatted data that contains its attribute information.

Automatic Calling Unit (ACU) — A device that enables a computer to dial telephone numbers. Both pulse-dialing and tone-dialing ACUs are available.

Auto-Skip — The IBM 3278 Display Station feature that causes the cursor to move from the last position in a field to the first position in the next unprotected field.

Automatic Log-On — The establishment of a session with the application specified in the mode definition of a resource upon activation of that resource. This is available only for resource types that do not have a mode key (such as SVQ, EMKSR, and PTR1).

Baud Rate — The number of discrete conditions or signal events that can take place on a line in a period of one second. The baud rate, in most instances, is equivalent to the number of bits per second.

BCAIM — See Bit-Oriented/Character-Oriented Asynchronous Interface Module.

BH — See Buffer Header.

BID — See Buffer Identifier.

Bid — A request for control of a line for the purpose of transmitting data. In the contention mode of sharing a line among several terminals, bids must be successful before transmission begins.

Binary Synchronous Communication (BSC or BISYNC) — A uniform discipline that uses a defined set of control characters and control character sequences for synchronized transmission of binary coded data between stations in a data communications system.

BISYNC — See Binary Synchronous Communication.

Bit-Oriented/Character-Oriented Asynchronous Interface Module (BCAIM) — An interface module, connected on the communications register unit (CRU), that supports asynchronous or synchronous mode communication using either a bit- or character-oriented protocol between a TI computer and an RS-232C/423 compatible communications device. The interface module also supports communication with a device on a differential local line.

Bit-Oriented Protocol (BOP) — A data communication protocol in which the position of each bit in the serial bit stream is significant in the protocol. Bit-oriented protocols have advantages over character-oriented protocols such as binary synchronous communication (BSC). Examples of bit-oriented protocols are synchronous data link control (SDLC) and high-level data link control (HDLC).

Block — A unit of data consisting of bytes or characters transmitted as a unit.

Board — In DNCS, a collection of one or more ports usually sharing a common line control discipline (LCD). DNCS supports three types of boards: two physical (FCCC and BCAIM) and one logical (VIRTUAL).

BOP — See Bit-Oriented Protocol.

bps — Bits per second, a measure of information transfer.

Bracket Protocol — In SNA, this protocol controls the flow of data between the station and the host application.

Broadcast — Simultaneous transmission to several receiving terminals on a multipoint line.

BSC — See Binary Synchronous Communication.

Buffer Header (BH) — A DNCS header that describes the contents of a buffer.

Buffer Identifier (BID) — The field of a request block that identifies the buffer for the DNCS operation.

Byte — A binary element composed of eight bits operated on as a unit within TI computers.

CCITT — See Consultative Committee International Telegraph and Telephone.

Channel — A logical data path that you can implement with various physical connections.

CI — Command Interpreter. See DNCS Command Interpreter.

CICS — See Customer Information Control System.

Circuit — A circuit connects resources to ports, allowing data to flow between users and their applications. Individual stations on a circuit are identified by their station IDs (sometimes called *polling addresses*). Circuits can be either physical, logical, or virtual.

Circuit Switching — A method of communication in which an electrical connection between calling and called stations is established on demand. The stations have exclusive use of the connection until the communication is completed.

Clear Key — A function key on the IBM 3278 Display Station that resets the screen to nulls and sends a cleared message to the host.

Cluster Controller — A controller that supports several, possibly different, terminal devices and performs limited network management functions.

Communications Request Block (CRB) — A data structure of the Communication Device Service Routine (COMDSR) that defines a communication device operation. It is passed between levels of the device service routine (DSR) at initiation and at completion of the operation.

Concurrent Sessions — The capability of having sessions established with more than one host application at a time, accomplished through the use of multiple virtual physical unit (VPU) definitions. A station can log on to one application through one VPU, then suspend that session and log on to another application through a second VPU.

Concurrent Transfers — A parameter that specifies the maximum number of file transfers that DNCS X.25 RFT can have active at any one time. The specification of concurrent transfers is used to allocate the number of buffers necessary to process that maximum number of simultaneous file transfers.

Configuration Switches — Switches on the TI 914A terminal used to set poll address, baud rate, and so on.

Consultative Committee International Telegraph and Telephone (CCITT) — A United Nations advisory committee that recommends international communications standards.

Contention — See bid.

Control Character — A character transmitted with the data characters to provide a function of the receiving equipment or to identify the type of transmission.

CRB — See Communications Request Block.

Customer Information Control System (CICS) — An IBM software product that provides an interface between applications programs and operating system access methods. It allows interaction with the data base in the central processor by remote or local display terminals.

Data Circuit-Terminating Equipment (DCE) — The subscriber's connection point to the network, usually a modem or line monitor that connects to the network nodes.

Data Link — A communications facility between two nodes of a network, where a node can be a terminal, a cluster controller, or a host computer.

Data Link Control (DLC) — A protocol that controls information interchange between two stations on a communications channel.

Data Phone — An AT&T company trademark that denotes data sets or modems used for data transmission over the regular telephone network.

Data Set — A Bell System term that describes equipment it supplies to perform modem functions. Also, an IBM term for a file.

Data Terminal Equipment (DTE) — The subscriber's computer equipment.

DCE — See Data Circuit-Terminating Equipment.

DLC — See Data Link Control.

DNCMO — See DNOS Common Communications Software.

DNCS — Distributed Network Communication System.

DNCS CI — See DNCS Command Interpreter.

DNCS Clock Task (DNCSCLK) — The timing task of DNCS.

DNCS Command Interpreter (DNCS CI) — The DNCS task that accepts operator commands and accesses command processors to execute them. The commands attach application programs, display and modify the network, list the status of various devices, and so on.

DNCS Device Control (DNCSDC) — The DNCS task that controls the terminals used to emulate IBM display stations.

- DNCS Generation (DNCSGEN)** — The system generation utility of DNCS that defines the network configuration for the communications and operating systems.
- DNCS Hard-Copy Terminal Task (EMKSR)** — The hard-copy terminal services task of DNCS. EMKSR allows keyboard send/receive (KSR) devices to operate in an SNA network.
- DNCS Initialization Task (DNCSINIT)** — The DNCS that initializes the DNCS memory-resident segment on initial execution of DNCS.
- DNCS Interface to NAP task (DNCSINAP)** — The DNCS task that allows programs outside of DNCS to interface with the DNCS Network Access Protocol (NAP) task.
- DNCS IPC** — The interprocess communication (IPC) device that provides communication between the DNCS nucleus and exterior DNCS products such as the DNCS/SNA Emulators or DNCS RFT.
- DNCS Log** — A sequential file automatically created during DNCS activation. The log provides a record of DNCS activity for use in troubleshooting and assessing system performance. The log resides on the DNCS system volume and has the pathname < DNCS> .\$\$DNCS.LOG.
- DNCS Network Access Protocol Task (DNCSNAP)** — The DNCS task that implements level 3 of the X.25 CCITT recommendation to support packet-switching networks (PSNs).
- DNCS Network Interface Adapter (DNCSNIA)** — The DNCS task that emulates an IBM hardware connector allowing SNA physical units to be connected via an X.25 network.
- DNCS Nucleus** — A communications software package that allows a DNOS-equipped system to function in a network. The DNCS nucleus provides facilities for generating DNCS according to user configuration requirements. The nucleus also includes the DNCS Command Interpreter (DNCS CI), allowing the user to monitor and control the states of resources in the configuration.
- DNCS Password** — A character string that you must enter with certain DNCS CI commands to indicate that you have the authority to issue the command.
- DNCS Path Control (DNCSPC)** — The DNCS task that processes communications between DNCS and an SNA host.
- DNCS Physical Device Control Task (DNCSPDCT)** — The DNCS task that performs communications with physical communications devices (boards).
- DNCS System Command Interpreter Task (EMSCI)** — The interface task of DNCS that allows entering DNCS CI commands from the DNOS System Command Interpreter.
- DNCS System Control Task (DNCSST)** — The main control task of DNCS.
- DNCS Terminal Services Routine (DNCSSTR)** — The terminal services routine for DNCS. DNCSSTR provides terminal services, particularly in initializing communications.
- DNCS Termination Task (DNCSSTOP)** — The DNCS task that ensures that all DNCS data structures have been released at termination of DNCS.

DNCS Transport Protocol Task (DNCSTRP) — The DNCS task that implements the OSI level four transport process to support X.25 Recommendations.

DNCS 3278 Emulation Task (EM3278) — The 3278 emulation task of DNCS that supports emulation of the IBM 3278 Display Station.

DNCS 3284 Emulation Task (EM3284) — The 3284 emulation task of DNCS that supports emulation of the IBM 3284 Printer.

DNCS 3287 Emulation Task (EM3287) — The 3287 emulation task of DNCS that supports emulation of the IBM 3287 Printer.

DNCSCLK — See DNCS Clock Task.

DNCSDC — See DNCS Device Control.

DNCSGEN — See DNCS Generation.

DNCSINAP — See DNCS Interface to NAP Task.

DNCSINIT — See DNCS Initialization Task.

DNCSNAP — See DNCS Network Access Protocol Task.

DNCSNIA — See DNCS Network Interface Adapter.

DNCSPC — See DNCS Path Control.

DNCSPDCT — See DNCS Physical Device Control Task.

DNCSST — See DNCS System Control Task.

DNCSSTOP — See DNCS Termination Task.

DNCSTRP — See DNCS Transport Protocol Task.

DNCSTSR — See DNCS Terminal Services Routine.

DNOS — Distributed Network Operating System.

DNOS Common Communications Software (DNCSMO) — A DNOS directory structure that contains the communications device service routines (DSRs) that you use in the generation of a DNOS system. These DSRs are copied to DNCSMO during the installation of each communications product.

Drop — The connection of a terminal to a line.

DRQ — A mnemonic that appears on the TI 914A screen while the host computer is downloading the terminal's operating system. DRQ means download request.

DTE — See Data Terminal Equipment.

DTO — A mnemonic that appears on the TI 914A screen if the terminal is placed on time-out status while the host computer is downloading it. DTO means download time-out.

Duplex — Simultaneous two-way transmission; synonymous with full duplex.

EIA — See Electronic Industries Association.

Electronic Industries Association (EIA) — A standards organization specializing in the electrical and functional characteristics of interface equipment. (RS-232C is an EIA standard.)

EMKSR — See DNCS Hard-Copy Terminal Task.

EMSCI — See DNCS System Command Interpreter Task.

EM3278 — See DNCS 3278 Emulation Task.

EM3284 — See DNCS 3284 Emulation Task.

EM3287 — See DNCS 3287 Emulation Task.

FCC — Federal Communication Commission.

FCCC — See Four-Channel Communications Controller.

FEP — See Front End Processor.

Field — A set of consecutive character positions on a display screen treated as a unit for data transmission and reception.

Firmware — A set of permanent or semipermanent instructions or microinstructions that provides a system function, utility, or application program.

FMP — See Function Management Protocol.

Four Channel Communications Controller (FCCC) — A four-channel controller connected on the TILINE that interfaces EIA RS-232C/423 compatible communications devices with a TI computer. Alternatively, each of the four channels can support differential local-line communications.

Four-Wire Circuit — A circuit that consists of two wire pairs or their logical equivalents. A four-wire circuit can provide simultaneous transmitting and receiving of data (duplex).

Front End Processor (FEP) — A communications computer associated with a host computer. It can perform line control, message handling, code conversion, error control, and applications functions such as control and operation of special-purpose terminals.

Full Duplex — Transmission of data over a communications line in both directions simultaneously.

Function Management Protocol (FMP) — A protocol of IBM's SNA that defines device-oriented functions that prepare the data to comply with the requirements of a device.

Half Duplex — Transmission of data over a communications line in only one of the two possible directions at any one time.

Handshaking — The portion of a protocol that exchanges control data to establish communication.

Hard-Copy Terminal — A terminal that consists of a keyboard, printing device, and optional automatic sending and receiving devices.

HDLC — See High-Level Data Link Control.

High-Level Data Link Control (HDLC) — A communications protocol defined by the International Standards Organization (ISO). HDLC is a bit-oriented protocol similar to SDLC.

Host Application — A program running on a mainframe computer at a remote site (for example, IMS).

Host Computer — A computer attached to a network to provide computation, data base access, execution of special programs, or software development. The host computer is the primary or controlling computer in a data communication system.

IDL — A mnemonic displayed on the TI 914A screen when the terminal is idle. That is, no terminal operating system is in memory, and DNCS is not polling the terminal.

IMS — See Information Management System.

Information Management System (IMS) — An IBM program product, executing in an SNA host, that uses various telecommunication access methods to provide applications access on the remote terminal system. IMS is a data base management subsystem.

Intelligent Terminal — A terminal that performs a level of processing in addition to emulation. An intelligent terminal includes a programmable processor.

Interprocess Communication (IPC) — The DNOS process that provides the means for two or more tasks to exchange information.

IPC — See Interprocess Communication.

ISO — International Standards Organization.

LAP — See Link Access Protocol.

LCD — See Line Control Discipline.

Leased Line — A line reserved for the exclusive use of a leasing customer without interexchange switching arrangements.

Line — A communications facility; synonymous with channel, circuit, path, or link.

Line Control Discipline (LCD) — The user (either host, local, or DNCS IPC) of the DNCS communications board.

Link Access Protocol (LAP) — A protocol that applies to the frame level of a communications system. The link layer (layer 2) protocol of X.25 Recommendations.

LLC — See Local Line Code or Local Line Control.

Local Line Code (LLC) — The protocol characters used by the DNCS local line control task to control communications between a V914 or P914 and DNCS.

Local Line Control (LLC) — A DNCS task that provides control of terminals that are connected to the system by differential local lines.

Log — See DNCS Log.

Logical Circuit — A pair of symmetrical IPC channels that the DNCS framework uses to communicate with remote file transfer (RFT) or the SNA Emulators.

Logical Unit (LU) — A device, or logical end user, in IBM's SNA. An LU is one type of network addressable unit of SNA.

LU — See Logical Unit.

LUNO — Logical unit number for DNOS.

Message — A unit of transmitted data that consists of either a complete transmission or a block.

Message Switching — The process of routing messages by receiving, storing, and forwarding complete messages within a data network.

Mode — The association of an application, LU, and VPU with a station. The mode definition provides the station with automatic or guaranteed access (or both) to host applications. Including a DNCS application synonym in the mode definition allows automatic access to the application when you press a mode key or when you activate the station.

The second function of a mode definition is to dedicate an LU to a station. A dedicated LU guarantees that you can have access to the SNA network without having to contend with other users for pool LUs. Though not in a pool, the dedicated LU still belongs to its VPU and the station owning the dedicated LU cannot obtain any of the pooled LUs in the same VPU.

Multidrop Line — See Multipoint Line.

Multiplexing — Interleaving or simultaneously transmitting two or more messages on a single communications channel.

Multiplexing (for RFT) — The maximum number of files that RFT can simultaneously transmit over each virtual circuit.

Multipoint Line — A single communications line to which more than one terminal is attached. Use of this type of line usually requires some kind of polling mechanism, addressing each terminal with a unique ID.

NAP — See Network Access Protocol.

Network — A configuration of local and remote computer terminals communicating under control of a host computer. A network supports communication between terminals and between the host computer and terminals.

Network Access Protocol (NAP) — The protocol used at the network level. An example of NAP is X.25 Recommendations.

Network Administrator — See SNA Network Administrator.

Network Interface Adapter (NIA) — See DNCS Network Interface Adapter.

Network Subscription — A subscription of facilities from a public network. Typically, this subscription includes network addresses, number and types of virtual circuits, baud rates, and protocol parameters.

Networking — A combining of networks to provide data communications between computers and terminals. Each host computer controls the terminals in its network.

NIA — See DNCS Network Interface Adapter.

Node — A control point for several communications lines. The node forwards or switches data among the lines either at the message or packet level.

Non-Return to Zero Inverted (NRZI) — In SDLC, the NRZI option ensures synchronization of the bit stream by changing the polarity of the bit stream each time a binary zero is transmitted. You must coordinate the NRZI option used by DNCS with the SDLC option defined by the host operating system.

Non-Transparent Mode — Transmission of characters in a defined character format (for example, ASCII or EBCDIC) in which all defined control characters and control character sequences are recognized and processed.

Normal Response Mode (NRM) — A mode of HDLC in which the receiving secondary station is subordinate to the transmitting primary station, and the secondary station transmission timing is controlled by the primary station. The secondary station is not expected to initiate transmissions unless the primary station requests it to do so. See Asynchronous Response Mode.

NRM — See Normal Response Mode.

NRZI — See Non-Return to Zero Inverted.

Nucleus — See DNCS Nucleus.

Null — A designation for the absence of a value, response, or character.

Open System Interconnection Model (OSI) — A standard proposed by ISO for layered communication protocols. X.25 conforms to the standard for the lower three layers (physical, link, and network). OSI also defines the following higher layers: transport control layer, session control layer, presentation control layer, and application layer.

OSI — See Open System Interconnection Model.

Packet — A group of bits that includes data and control elements and that is switched and transmitted as a composite whole. The data and control elements and possibly error control information are arranged in a specified format.

Packet-switching Network (PSN) — A network of terminals that uses packet switching to transfer data.

Packet Switching — A data transmission process that utilizes addressed packets whereby a channel is occupied only for the duration of transmission of the packet. The channel is then available for the transfer of other packets. Data can be formatted into packets either by data terminal equipment or by network equipment for transmission and multiplexing purposes. See Circuit Switching and Message Switching.

Password — See DNCS Password.

PDN — See Public Data Network.

PE — See Permanent Virtual Circuit

Pencil Switches — Configuration switches on a controller board that are used to set addresses, modes, and options.

Permanent Virtual Circuit (PVC) — A logical channel reserved for use by RFT to communicate with one specific remote DTE address.

Physical Circuit — Communication line that connects the DNCS nucleus to the SNA host, to a collection of TI 914A terminals and printers, or to a packet-switching network (PSN).

Physical Unit (PU) — A network addressable unit in IBM's SNA.

Physical Unit, Type One (PU__T1) — A terminal node of IBM's SNA that supports the devices and performs a minimal network function.

Physical Unit, Type Two (PU__T2) — A terminal node of IBM's SNA that performs a cluster controller function for the attached devices. A PU__T2 also supports applications programs.

PLU — See Primary Logical Unit.

Point-to-Point Connection — A network configuration in which a connection is established between two (and only two) terminals. The connection may include switching facilities. A circuit connecting two points without the use of any intermediate terminal or computer is also a point-to-point connection. See Multipoint Line.

Polling — The process of requesting another station or node to transmit data. Polling is often used on multipoint lines to control the sequence of terminal transmissions. See Selecting.

Port — The communications interface for DNCS. All information handled by DNCS passes through a port. Ports are defined as communications devices during the generation of DNOS.

Primary Logical Unit (PLU) — A primary device, or logical end user, in IBM's SNA. The PLU is associated with the host computer.

Private Line — See Leased Line.

Programmed Station Control (PSC) — A DNCS facility that allows a user-written program to control or emulate an SNA station.

Protocol — The rules governing requests and responses by which units in a communications network coordinate and control data transfer operations.

PSC — See Programmed Station Control.

PSN — See Packet-Switching Network.

PU — See Physical Unit.

PU__T1 — See Physical Unit, Type One.

PU__T2 — See Physical Unit, Type Two.

Public Data Network (PDN) — A network for transferring data that offers its services to the public.

PVC — See Permanent Virtual Circuit.

RDTC — See Remote Distributed Terminal Controller.

Receive Only (RO) — In DNCS X.25 RFT, a network subscription parameter stating that the virtual circuit being defined can be used only to receive call requests. It cannot be used to transmit requests.

Remote Distributed Terminal Controller (RDTC) — A controller that permits as many as 16 TI 914A terminals on a local line to be connected to a DNCS system by a four-wire, full-duplex, leased line. The RDTC performs EIA to local line signal conversion.

Remote Station — A station in a point-to-point switched network that can call or be called by the central station.

Request Block (RB) — A DNCS data structure that defines a request for processing.

Request/Response Unit (RU) — The original unit of information within a request or response transmitted within SNA.

Response Time — The elapsed time between the initiation of transmission of the last character of a message at a terminal and the receipt of the first character of the reply. Response time includes terminal delay, network delay, and service mode delay.

Reverse Channel — A simultaneous data path of a half-duplex circuit in the reverse direction. It is mainly used for acknowledgement of data blocks received on the circuit.

RO — See Receive Only.

Route — A route is an entity containing network subscription information that defines a path to a particular site through a network.

RS-232C — The EIA standard that defines the electrical and mechanical interface between data circuit-termination equipment (DCE) and data terminal equipment (DTE).

RU — See Request/Response Unit.

SDLC — See Synchronous Data Link Control.

Secondary Logical Unit (SLU) — A secondary device, or logical end user, in IBM's SNA. The secondary logical unit is associated with the remote system. SLUs are assigned types that reflect the characteristics of the following devices that use them:

- **SLU Type 1 (SLU.T1) devices** — Format data according to embedded SNA character stream controls. PTR1 printer stations, KSR I/O stations, and printers attached to TI 914A terminals belong to this SLU type.
- **SLU Type 2 (SLU.T2) devices** — Format data according to IBM 3270 display station orders embedded in the data. VDT2 display stations, TI 914A terminals, and programmed station control (PSC2) programs serving as display stations belong to this SLU type.
- **SLU Type 3 (SLU.T3) devices** — Format data according to IBM 3270 printer orders embedded in the data. PTR3 printer stations and PSC3 programs serving as printer stations belong to this SLU type.

Secondary Station — A station that is subordinate to a primary station according to the rules of the protocol used for communication between the two stations.

Selecting — The process of inviting another station or node to receive data. See Polling.

Send Only (SO) — In DNCS X.25 RFT, a network subscription parameter stating that the virtual circuit being defined can be used only to transmit call requests and cannot be used to receive requests.

Send/Receive (SR) — In DNCS X.25 RFT, a network subscription parameter stating that the virtual circuit being defined can be used to both send and receive call requests.

Sequence Identifier (SID) — An identifier associated with a message handled by DNCS; this identifier defines the path of the message within DNCS.

Service Queue (SVQ) — A work scheduling utility in the DNCS nucleus that allows execution of DNOS/DNCS tasks at a user-defined date and time. The type of work you can schedule includes the DNOS SCI commands Print File (PF), Execute Batch (XB), Execute Batch SCI Job (XBJ), and DNCS host application requests. With the DNCS X.25 RFT, you can schedule and execute these requests on a remote computer.

Session — Setting up communications between an end user and an application.

Session Profile Descriptor — An eight-character alphanumeric string that indicates the state of an LU session.

SID — See Sequence Identifier.

Site — A site is a symbolic name for another computer on the X.25 network. Site names are used to support the RFT or an NIO package such as DNIO. Before you can use a site name to access a remote computer, at least one route must be defined under it.

Slave — A remote system or terminal whose functions are controlled by a master system. Like a host system, it responds to remotely generated requests; unlike a host system, a slave is usually limited to a few operations.

SLU — See Secondary Logical Unit.

SNA — See Systems Network Architecture.

SNA Network Administrator — The individual responsible for the generation and operation of the SNA network at the host site.

SO — See Send Only.

SR — See Send/Receive.

SSCP — See System Services Control Point.

Start Bit — A bit that identifies the beginning of a character in asynchronous transmission.

Station — An independently controllable configuration of data terminal equipment on a data link. A station can function as a source or destination for messages, or it can control message flow on the link by means of data communication control procedures. Also, a terminal, printer, or PSC program known to DNCS by its network address. See Terminal.

Stop Bit — A bit that identifies the end of a character in asynchronous transmission.

SVC — See Switched Virtual Circuit.

SVQ — See Service Queue.

Switched Line — A communications link interconnected through a switching center, for which the physical path can vary with each usage (for example, the dial-up telephone network).

Switched Virtual Circuit — A nonreserved logical channel assigned to a DTE address.

Synchronization Character — A character defined to establish correct timing in the receiving device with respect to the transmitting device.

Synchronous Data Link Control (SDLC) — A uniform discipline for the transfer of data between stations in a point-to-point, multipoint, or loop arrangement using synchronous, bit-oriented data transmission techniques.

Synchronous Mode — A mode of data transmission over a communications channel that uses synchronization characters to establish and maintain correct time relationships in the receiving device. Synchronization characters precede the data and are transmitted between blocks of data to maintain synchronization.

Synchronous Transmission — Transmission in which data character bits are transmitted at a fixed rate with equal time intervals between characters.

System Services Control Point (SSCP) — In IBM's SNA, a special-purpose network addressable unit used for network management. An SSCP maintains information required by a primary logical unit to establish and maintain a logical connection.

Systems Network Architecture (SNA) — The total description of the logical structure, formats, protocols, and operational sequences for transmitting information units through the communication system. Specifically, an IBM network architecture having a structure that allows the end users to be independent of, and unaffected by, the specific communication system services and facilities used for information exchange.

TABS Mode — An operating mode of the shifted TAB SKIP key. In the TABS mode, pressing the TAB key causes the cursor to move from tab stop to tab stop. In the WORD mode of the IBM 3270 display station emulation, pressing the TAB key moves the cursor to the beginning of the next word. (See Word.)

TDM — See Time Division Multiplexing.

Teletype — Trademark of Teletype Corporation. Usually refers to one of their teleprinters. See TTY.

Terminal — A device or computer connected to a local or remote host system for which the host system provides computational and data access services. Two common types of terminals are time-sharing and remote batch terminals.

Terminal Operating System (TOS) — The operating system downloaded to the TI 914A terminal by the host computer.

TILINE (*) — The asynchronous, 50-megabit-per-second bus of a TI 990 computer, used by the central processing unit (CPU), memory, and disk and tape controllers.

Time Division Multiplexing (TDM) — Multiplexing several data paths on a single communications facility by assigning time slices for use by the data paths according to a defined method.

Time-Out — A condition that occurs when a defined time for a particular function or operation expires before completion of the function or operation.

Time Share Option (TSO) — An IBM application program, generally used for system program and application development.

* TILINE is a trademark of Texas Instruments Incorporated.

Time Sharing — A communications application that provides the services of a computer or multiprocessing computer system to multiple users by allotting a share of processing time to each user as requested.

TOS — See Terminal Operating System.

Touch Tone — An AT&T company trademark for tone dialing equipment.

Troubleshooting — A detailed investigation of problems.

Trunk — A communications line between two exchanges.

TSO — See Time Sharing Option.

TTY — An abbreviation for teletype. Also, commonly used for any asynchronous hard-copy terminal.

Two-Wire Line — A communication line that provides half-duplex transmission over a single wire pair or its logical equivalent.

Unattended Operation — The automatic features of a station's operation that permit transmission and reception of messages without the services of an operator.

VC — See Virtual Circuit.

VDT — See Video Display Terminal.

VDU — See Video Display Unit.

Video Display Terminal (VDT) — A computer terminal with a keyboard for data entry and a video screen for display.

Video Display Unit (VDU) — The video screen for display on a computer terminal.

Virtual Circuit (VC) — A logical channel between two network subscriber's DTEs through an X.25 network.

Virtual Physical Unit (VPU) — A DNCS construct designed to control the number of LUs a station can use concurrently—one for each VPU in the configuration.

Virtual Telecommunications Access Method (VTAM) — A set of IBM programs that execute in the IBM host node to control communications.

VPU — See Virtual Physical Unit.

VTAM — See Virtual Telecommunications Access Method.

V.24 — A CCITT recommendation for the electrical interface between data terminal equipment (DTE) and data circuit-termination equipment (DCE) that is equivalent to EIA RS-232.

Way Station — A station on a multipoint channel.

Word — In the context of the WORD operating mode of the shifted TAB SKIP key in the IBM 3278 display station emulation, one of the following:

- A string of letters and numerals
- A string of four consecutive blanks or nulls
- A field

In the context of programming languages, the standard unit of data that the computer can obtain, store, and operate as a single unit.

X.21 Recommendations — A CCITT international standard for the first layer of the seven-layer ISO model for network architecture, which defines a physical interface between devices and the network. X.21 is a general-purpose electrical interface between terminals and new synchronous public data networks that provide circuit-switched and leased-circuit services.

X.25 Recommendations — A CCITT international standard for a public packet-switching network (PSN), which is suitable as a computer-to-computer protocol for other types of networks. It specifies a three-level communication hierarchy: network level, link control level, and physical control level. DNCS supports X.25 network interface between TI computers executing DNOS.

Alphabetical Index

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HOW TO USE INDEX

The index, table of contents, list of illustrations, and list of tables are used in conjunction to obtain the location of the desired subject. Once the subject or topic has been located in the index, use the appropriate paragraph number, figure number, or table number to obtain the corresponding page number from the table of contents, list of illustrations, or list of tables.

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- Sections — Reference to Sections of the manual appear as “Sections x” with the symbol x representing any numeric quantity.
- Appendixes — Reference to Appendixes of the manual appear as “Appendix y” with the symbol y representing any capital letter.
- Paragraphs — Reference to paragraphs of the manual appear as a series of alphanumeric or numeric characters punctuated with decimal points. Only the first character of the string may be a letter; all subsequent characters are numbers. The first character refers to the section or appendix of the manual in which the paragraph may be found.
- Tables — References to tables in the manual are represented by the capital letter T followed immediately by another alphanumeric character (representing the section or appendix of the manual containing the table). The second character is followed by a dash (-) and a number.

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- Figures — References to figures in the manual are represented by the capital letter F followed immediately by another alphanumeric character (representing the section or appendix of the manual containing the figure). The second character is followed by a dash (-) and a number.

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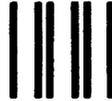
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