Release Notice:
TCP/IP

Release 5.4

Part number 085-600301-00

This release notice applies to the following models:

Q0001

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Release 5.4

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1 Introduction

This release notice describes revision 5.4 of the TCP/IP package and its installation. Revision 4.31 is the previous version of this product. A printed release notice always accompanies the software. You can print additional copies of this notice after you have installed the product. The filename for the release notice is **/usr/release/tcpip_5.4.rn**. In the event of differences in the content of the printed copy of this notice and of the on-line lineprinter version, the printed copy takes precedence.

2 Product Description

TCP and IP are communications protocols used on a large number of networks. The TCP/IP package consists of the additional software necessary to let Data General's DG/UX™ operating system communicate over those networks. The package supports devices for connection to Ethernet, Token Ring, and X.25 networks.

The TCP/IP package includes kernel support for the TCP, UDP, IP, ICMP, ARP and RARP protocols. It also includes user commands and server (daemon) processes that support the FTP, TFTP, BFTP, TELNET, SNMP, and SMTP protocols and the Berkeley R commands.

The TCP/IP package provides Application Programming Interfaces (API) for BSD sockets and the AT&T TLI library for the STREAMS environment. Additionally, the TCP/IP package supports the 88open Binary Compatibility Standard Networking Supplement (BCSNS).

3 Environment

This section describes the hardware and software environment for TCP/IP.

3.1 Hardware

TCP/IP revision 5.4 runs on any AViiON® system running DG/UX revision 5.4 system software. New in this release is support for Token Ring Networks using the VTRC -- VME-bus Token Ring Controller (**vitr**).

The hardware configuration should include at least one LAN controller and the internal and external cables necessary to connect the controller to an Ethernet or IEEE 802.3 Network. TCP/IP supports the following Ethernet controllers:

- VLC -- V/Ethernet 3207 Hawk LAN Controller (**hken**)

- Integrated Ethernet Controller (**inen**)

- Second Generation Integrated Ethernet Controller (**dgen**).

Wide Area Network (WAN) support is optionally available for TCP/IP by using revision 2.10 of X.25 for AViiON® Systems and a synchronous controller such as the VSC/3 or VSC/4.

The TCP/IP package requires 6000 free blocks of space in the **/usr** file system and 600 blocks in the root file system. Installation of the man pages requires an additional 750 free blocks in the **/usr** file system.

3.2 Software

TCP/IP 5.4 requires DG/UX release 5.4 or later. TCP/IP 5.4 fully interoperates with previous releases of the TCP/IP product.

4 Enhancements and Changes

4.1 Enhancements

Enhancements to TCP/IP make it easier to install and manage. These enhancements include simplified setup scripts, complete sysadm support, and the addition of SNMP for network management. Newer versions of the **sendmail** and **telnetd** commands are included in this release. Other enhancements include: TLI access to TCP/IP, improvements in the TCP protocol implementation, IP support for 802 networks, diskless booting across subnets, and support for new communications hardware.

4.1.1 System Installation and Administration

You can now load TCP/IP with **diskman** while loading DG/UX, or with **sysadm** after installing DG/UX. For more information, consult *Installing the DG/UX™ System*.

You can accomplish TCP/IP system administration through **sysadm**. The 5.4 version of **sysadm** provides both the traditional ASCII menus or an OSF/Motif™ based graphical user interface. For more information about **sysadm**, consult either the man page or *Managing the DG/UX™ System*.

4.1.2 SNMP

New in this release is **snmpd**, the Simple Network Management Protocol (SNMP) agent. The agent is a server process that responds to queries from management software running on a SNMP Network Management Station (NMS). The NMS is typically located in the Network Operations Center (NOC) and runs special SNMP software to communicate with the agents running on each of the network elements. The TCP/IP package includes the agent software necessary for the NMS to communicate with the AViiON system. In addition to the agent, the following SNMP tools are available in **/usr/bin**: **getone, getmany, getnext, setany, trap_send**, and **trap_recv**. For more information about these commands, consult the man pages or *Managing TCP/IP on the DG/UX™ System*.

SNMP Network Management Station software is available for AViiON Systems from Digital Analysis Corporation, Reston, Virginia. For more information about the EYE*NODE Network Management Station, contact your local Data General sales representative.

4.1.3 IDA Sendmail

This release contains a new version of **sendmail** based on BSD sendmail version 5.6.4, the IDA Sendmail Enhancement Kit, and additional improvements by Data General. Data General would like to recognize Lennart Lovstrand from the University of Linkoping, Sweden, for the IDA Sendmail Enhancement Kit. The IDA enhancements simplify configuration of sendmail for large complex networks and provide better UUCP support. Additional changes made by Data General improve performance for large messages and reduce the chances of message duplication. Included in this release are two new commands, **mailstats** and **dbm**, for **sendmail** and **dbm**(3) database support respectively. See the man pages for details.

4.1.4 AT&T V.4 telnetd

A new version of **telnetd**, ported from the AT&T V.4 sources, is the default TELNET server. To insure backward compatibility, the previous version of **telnetd** is available as **/usr/bin/dg_telnetd**. Future versions of TCP/IP will provide only the AT&T version of telnetd.

If you need to run the previous version of telnetd, modify your **/etc/inetd.conf** file to specify the pathname to **/usr/bin/dg_telnetd**. You can modify the **/etc/inetd.conf** file by using the **sysadm** networking daemons function. For more information about how to modify the **/etc/inetd.conf** file, consult the **inetd.conf(4)** man page or *Managing TCP/IP on the DG/UX™ System*. For more information about the TELNET servers, consult the **telnetd** and **dg_telnetd** man pages.

4.1.5 TLI Access to TCP/IP

The TCP/IP protocol is now accessible from the AT&T TLI library for STREAMS based network programming. For more information about how to use the TLI library, consult *Programming with TCP/IP on the DG/UX™ System* or *Unix ® System V Release 4 Programmer's Guide: Networking Interfaces*.

4.1.6 TCP Enhancements

Enhancements to the TCP protocol implementation were derived from the BSD 4.3 Tahoe distribution. These enhancements include several new algorithms from Van Jacobsen such as slow-start on idle links, retransmission timer calculation, and congestion window expansion for duplicate acknowledgments.

4.1.7   IP Support for IEEE 802 Networks

TCP/IP supports IEEE 802 Networks according to RFC1042 (A Standard for the Transmission of IP Datagrams over IEEE 802 Networks). This support includes the IEEE 802.2 Logical Link Control Layer for use with CSMA/CD (IEEE 802.3) and Token Ring (IEEE 802.5) communication controllers. To use IP with IEEE 802 networks, configure the **llc()** pseudo device driver and the appropriate hardware device drivers (i.e., **inen()**, **hken()**, **dgen()** or **vitr()**) into the kernel and specify the interface parameters in **/etc/tcpip.params**. For more information about configuring the kernel, see *Installing the DG/UX™ System*. For more information about specifying the interface parameters in **/etc/tcpip.params**, see *Managing TCP/IP on the DG/UX™ System*.

4.1.8   Diskless Booting Across Subnets

TCP/IP supports booting diskless workstations from servers on different subnets. For more information, see the release notice accompanying the ONC™/NFS® for AViiON® Systems package.

4.1.9   TCP/IP over Token Ring

TCP/IP supports 4 or 16 Mbps Token Ring networks (IEEE 802.5) using the VTRC communication controller. Diskless operation is not supported for Token Ring networks. To use the VTRC controller, you will need to configure the **vitr()** device driver into your kernel and specify the interface parameters in **/etc/tcpip.params**. For more information about configuring a kernel, see *Installing the DG/UX™ System*. For more information about specifying interface parameters in **/etc/tcpip.params**, see *Managing TCP/IP on the DG/UX™ System*.

4.1.10   Second Generation Integrated Ethernet Controller

The **dgen()** device driver provides support for the AV530 and AV4600 Series Second Generation Integrated Ethernet Controller. To use the Second Generation Integrated Ethernet Controller, configure the **dgen()** device driver into your kernel and specify the interface parameters in **/etc/tcpip.params**. For more information about configuring a kernel, see *Installing the DG/UX™ System*. For more information about specifying interface parameters in **/etc/tcpip.params**, see *Managing TCP/IP on the DG/UX™ System*.

4.2   Changes

The configuration files **/etc/tcpip.params** and **/etc/sendmail.cf** have changed in this release. Additionally, the following commands have user visible changes in this release: **sendmail, telnet, telnetd, ftp**, and **ftpd**. These changes are described in the following sections.

4.2.1   /etc/tcpip.params

The format of **/etc/tcpip.params** changed to support new communication controllers and to configure controllers for multi-protocol access. See the "Notes and Warnings" section below for more information about this change.

4.2.2   /etc/sendmail.cf

Previous releases of TCP/IP included several prototype configuration files for sendmail. A single enhanced **/etc/sendmail.cf.proto** replaces the previous special purpose files. The new prototype file understands both UUCP and TCP style addresses. There are several modifications you should make to the configuration file before using it on your system. See the commentary in the prototype file and in *Managing TCP/IP on the DG/UX™ System* for more details.

4.2.3   sendmail

The previous version of **sendmail** would read configuration information from the **.mailcf** file in the user's home directory. For security reasons, the new version of sendmail does not use this file. To override the default system configuration file you can invoke **sendmail** with the "-C" argument to specify an alternative configuration file.

4.2.4   telnet

If you start a connection by specifying a host on the command line, **telnet** returns back to the shell when you end the session. Previously, **telnet** would return to command mode at the end of a session.

When a TELNET server requests terminal information, **telnet** returns the value specified in the TERM environment variable. Previously, **telnet** would return "unknown."

4.2.5   dg_telnetd

The compatibility option of **dg_telnetd** (-c) is enabled by default and a new option (-s) enables the previous mode of operation. The compatibility option specifies that **dg_telnetd** should negotiate for a mode of operation based on characters instead of lines.

Attempts to paste more than 255 characters into an **xterm** window running **dg_telnetd** no longer causes the connection to abort.

4.2.6 ftpd

The FTP server program allows the user to pass additional arguments to the "ls" command. Previously **ftpd** allowed only the "ls -l" command. The new version of **ftpd** simply passes the arguments to the "ls" command for interpretation.

4.2.7 FTP Interoperability

The ASCII transfer mode for **ftp** and **ftpd** is now compatible with BSD 4.3 and SunOS™ 4.0 systems. Because of this change you should not use ASCII transfers to move binary files; if you do, data corruption may occur. See the "Notes and Warnings" section below for more information.

5 Notes and Warnings

5.1 Notes

This section discusses SNMP setup, using **routed** with multiple interfaces, using TELNET, setting your broadcast address, and configuring a Token Ring interface.

5.1.1 SNMP Setup

Documentation for SNMP configuration and operation is in *Managing TCP/IP on the DG/UX™ System*. In addition to the manual, man pages are provided for each SNMP command and configuration file. For most systems the default configuration is adequate and requires no additional setup.

The SNMP default configuration provides read-only access to your system. You can configure the SNMP agent using **sysadm** or by modifying the **/etc/snmpd.config**, **/etc/snmpd.communities**, and **/etc/snmpd.trap_communities** files. Sending a SIGHUP signal to the agent, using **kill** or **dg_kill**, causes it to reread the configuration files.

5.1.2 Using routed with Multiple Interfaces

If **routed** is used on a system with more than one network interface or **routed** is explicitly set to supply routes, care must be taken during configuration to insure proper operation. In particular, the following rules should be observed:

- Each connected network must have more than one routed supplier (a system running **routed** must have more than one network interface or must be explicitly set to supply routes).

- Interfaces that are neither point-to-point or broadcast (i.e., **ixe**) must have an entry in the **/etc/gateways** file that names a **routed** host reachable through the interface.

Failure to observe these rules may result in **routed** deleting the interface route for the interface in question. When **routed** deletes an interface route it produces the syslog message "deleting route to interface <interface name> (timed out)." Check the **routed** man page for further details.

5.1.3   Using TELNET

TERM Variable

The 5.4 versions of **telnet** and **telnetd** set the TERM variable on the remote system to match the TERM variable on the local system. Previous versions of **telnetd** did not request the TERM variable, and **telnet** responded with "unknown" when a server requested a terminal type. When you **telnet** from a 4.3x to a 5.4 system, the TERM variable is initially set to "unknown." If you intend to use both 4.3x and 5.4 systems, set the TERM variable in your **.cshrc** or **.profile** files to match the type of terminal you are using.

Using TELNET with Curses, Terminfo, and Termcap Applications

The 5.4 versions of **telnet** and **telnetd** do not set the stty values for row and columns or set the environment variables LINES and COLUMNS. To use **curses**, **terminfo**, or **termcap** applications with TELNET, either: use a TERM variable that correctly represents the screen size, specify the correct stty row and column settings using the **stty** command, or set the LINES and COLUMNS environment variables.

Using TELNET with X windows

Telnet does not propagate window size information in the X window environment. You should use the **resize** command to set the screen size after you resize a window.

You should also consider adding the **resize** command to your **.login** or **.profile** to initialize the size of the window when you login.

Interactions Between TELNET and the Line Discipline

The **telnet** client translates the kill, erase, and interrupt characters defined by the local line discipline into special TELNET protocol sequences. The **telnetd** server translates the TELNET protocol sequences into the corresponding characters defined by the remote line discipline. For most applications this translation is transparent, however, some applications may redefine the meaning of these characters. For example, control-u is typically used as the kill character, however, in **vi** control-u moves the text up. If your local kill character is "@" and the remote kill character is control-u, when you type an "@", **vi** will receive a control-u. To avoid confusion, you should use the same kill, erase, and interrupt characters on the local and remote systems. For more information about setting your kill, erase, and interrupt characters, see the "Control Assignments" section of the **stty(1)** man page.

When using **editread**, typing the interrupt character, typically control-c, at the shell prompt will not erase the line. To erase the line, you should type the kill character, typically control-u.

If you **telnet** to a host, then **rlogin** to another host, the kill, erase and interrupt characters will not work. You should use either **telnet** or **rlogin** to connect to both hosts to avoid this interaction.

5.1.4 Setting your Broadcast Address

The setup script assumes that your system will use an Internet standard broadcast address of all ones. TCP/IP recognizes all zeros or all ones as broadcast addresses. However, for transmission it uses the broadcast address specified for the interface. If you need to interoperate with 4.2 BSD based systems, set the broadcast address to all zeros. If you need to use all zeros for a broadcast address, use **sysadm** to modify the interface parameters after the setup is complete.

5.1.5 Configuring a Token Ring Interface

To setup the VME Token Ring Controller (VTRC), complete the TCP/IP setup and then use **sysadm** to add the **vitr** interface. For correct operation you must configure the **vitr()** device driver into the kernel, specify the interface parameters in **/etc/tcpip.params**, and reboot the system. For more information about configuring devices into your kernel, see *Installing the DG/UX™ System*. For more information about using **sysadm** to manage interfaces, see *Managing TCP/IP on the DG/UX™ System*.

5.2 Warnings

This section describes features of the TCP/IP package to which you should pay special attention. Specifically it describes changes for STREAMS based pseudo terminals, FTP interoperability, mailbox format, and changes to the configuration files **/etc/sendmail.cf** and **/etc/tcpip.params**.

5.2.1 Changes for STREAMS Based Pseudo Terminals

The server programs **telnetd** and **rlogind** are modified to work with STREAMS Pseudo Terminals, which are introduced in the DG/UX 5.4 system. Previous versions of these programs cannot be used on the DG/UX 5.4 system.

5.2.2 FTP Interoperability

Changes to **ftp** and **ftpd** make them compatible with the BSD 4.3 and SunOS 4.0 FTP programs. However, because of this change, ASCII transfers of binary files between DG/UX TCP/IP 5.4 and 4.3x systems result in data corruption.

The change involved the mapping of carriage-return during ASCII transfers. The previous release of FTP (4.3x) mapped carriage-return into carriage-return and null, as did BSD 4.2 and SunOS before release 4.0. The 5.4 implementation of FTP behaves like BSD 4.3 and SunOS 4.0 and does not translate carriage-returns. If a binary file is transferred in ASCII mode from a 4.3x to a 5.4 system the translation converts a carriage-return into carriage-return & null which results in a larger destination file. If a binary file is transferred in ASCII mode from a 5.4 to a 4.3x system the translation converts a carriage-return null into a carriage-return which results in a smaller destination file.

You should always use **ftp** command "type image" before transferring binary files.

5.2.3   Mailbox Format

When **sendmail** receives a mail message addressed to a user on the local system it usually invokes **/bin/mail** to deliver the message. The **/bin/mail** command changed in DG/UX release 5.4 and uses a different mailbox format. In particular, **/bin/mail** no longer escapes "<*nl*>From" lines in the body of a message with an ">" character. Traditionally, mail reading programs use the "<*nl*>From" line as a delimiter specifying the beginning of a new message. The 5.4 version of **/bin/mail** appends a "Content-Length" header to the message which can be used to determine the length of the current message. For more information about this change, see the *DG/UX*™ *release notice*. For more information about the message format, see the **mail** man page.

The change in mailbox format may cause minor compatibility problems with some mail reading programs. Since this change is essential for future **mail** enhancements we recommend you modify your mail reading programs to support the new format. If you must maintain backward compatibility, you can use the "E" mailer flag in the **/etc/sendmail.cf** file. This mailer flag forces **sendmail** to escape "<*nl*>From" lines before invoking **/bin/mail** to deliver the message. For more information about mailer flags in the /etc/sendmail.cf file, see the "Defining Mailers and Rewriting Rules" section of *Managing TCP/IP on the DG/UX*™ *System*.

5.2.4   /etc/sendmail.cf

The **/etc/sendmail.cf.proto** prototype file is general purpose and you will need to tailor it before using it on your system. The prototype file contains commentary about the changes you should make. For more information about the sendmail configuration file, consult *Managing TCP/IP on the DG/UX*™ *System*.

If you are not using the **/etc/sendmail.cf.proto** file provided in this release and you run DNS (i.e., "RES" is specified first in your **/etc/svcorder** file) you may need to make DNS-specific changes to your **/etc/sendmail.cf** file. In particular, **sendmail** uses a fully qualified name as the default hostname when you use DNS. You can override the default hostname by defining the "w" macro in the **/etc/sendmail.cf** file. For more information about configuring **sendmail**, consult the sendmail chapter in *Managing TCP/IP on the DG/UX*™ *System*.

If you are not using the **/etc/sendmail.cf.proto** file provided in this release, your **/etc/sendmail.cf** may contain incorrect values for load factors. The computation DG/UX uses for load factors changed in 5.4 and typically returns smaller values than in previous releases. The default values in the new **/etc/sendmail.cf.proto** are 2 for queuing mail and 3 for refusing new connections.

5.2.5   /etc/tcpip.params

The format of the **/etc/tcpip.params** file changed in this release of TCP/IP. Do not replace the 5.4 **/etc/tcpip.params** with a previous version, because the format is not backward compatible and results in a non-functioning network. If you are upgrading TCP/IP, the setup script detects and converts the **/etc/tcpip.params** file into the new format. The conversion procedure saves a backup copy of your original file in **/etc/tcpip.params.bak**.

6   Documentation

6.1   Titles

This section describes Data General and third party manuals applicable to the DG/UX TCP/IP package.

NOTE: When you are ordering new manuals from Data General for TCP/IP Release 5.4, be sure to include the revision number with your order. The revision number is the last two digits in the manual's part number.

- *Using TCP/IP on the DG/UX™ System* (093-701023-02)

- *Managing TCP/IP on the DG/UX™ System* (093-701051-04)

- *Programming with TCP/IP on the DG/UX™ System* (093-701024-02)

- *Installing the DG/UX™ System* (093-701087-00)

- *Managing the DG/UX™ System* (092-701088-00)

- *Unix® System V Release 4 Programmer's Guide: Networking Interfaces*, Prentice Hall, ISBN 0-13-947078-6

6.2   Changes

This section describes changes or corrections which are not in the current version of the manuals.

The *Managing TCP/IP on the DG/UX™ System* manual contains only one man page for **telnetd(1m)** and refers to the Data General version, now called **dg_telnetd**. The manual pages for both the Data General and AT&T versions of telnetd are available

online as **dg_telnetd(1m)** and **telnetd(1m)** respectively.

The sendmail load average limits are reversed in *Managing TCP/IP on the DG/UX™ System*. On page 4-16, paragraphs 2 and 3, the description of the X option should specify a value of 3.0, while the description of the x option should specify a value of 2.0.

7   Software Distribution

This section discusses release media and files.

7.1   Media

The DG/UX System release tape contains the TCP/IP package. The DG/UX System is included in the following packages:

* Model Number P001, the DG/UX Operating System with X Windows package (079-600183-00).

* Model Number Q001, the DG/UX Operating System package (079-600182-00)

7.2   Files

The **/usr/release/tcpip_5.4.fl** file contains the list of files in the TCP/IP package. The **/usr/release/tcpip.man_5.4.fl** file contains a list of the man pages.

8   Installation and Upgrade Instructions

This section describes loading and setting up TCP/IP on your system. Installation instructions are for users loading software onto the system for the first time. Upgrade instructions are for users loading software on to an existing release of TCP/IP.

8.1   Installation Instructions

You can load the TCP/IP software with **diskman** while loading DG/UX or with **sysadm** after installing DG/UX. For detailed instructions on installing TCP/IP, see *Installing the DG/UX™ System*. For instructions on loading and setting up software with **sysadm**, see *Managing the DG/UX™ System*.

8.2 Upgrade Instructions

8.2.1 Backing Up the Environment

If you are upgrading the software from a previous release of TCP/IP, you may want to backup your databases from the **/etc** directory to tape. The installation process does not overwrite existing databases so the backup is only a precautionary measure that allows you to recover your current environment should something go wrong during the upgrade. The following is a list of **/etc** databases you may want to back up before re-installing or upgrading TCP/IP: **aliases, bftp.conf, ethers, gateways, hosts.equiv, hosts, inetd.conf, named.boot, networks, pmterrtab, pmttapetab, protocols, resolv.conf, sendmail.cf, services, svcorder, tcpip.rclinktab**, and any other DNS related files as specified in **/etc/named.boot**.

CAUTION: You should not restore your original **/etc/tcpip.params** file, because the format has changed.

8.2.2 Loading and Setting Up the Software

You can load the TCP/IP software with **diskman** while loading DG/UX or with **sysadm** after installing DG/UX. For detailed instructions on installing TCP/IP, see *Installing the DG/UX™ System*. For instructions on loading and setting up software with **sysadm**, see *Managing the DG/UX™ System*.

8.2.3 Changes to Prototype Files

Your TCP/IP databases are not overwritten during the upgrade, however, they do not get updated with new information from the prototype files. The **/etc/services.proto**, **/etc/inetd.conf.proto**, and **/etc/tcpip.rclinktab.proto** files have changed since TCP/IP 4.31.

/etc/services.proto

The **/etc/services.proto** file contains new entries for Data General Services Daemon, network listener daemon, and SNMP. You should update your **/etc/services** file with the following entries:

```
dgsvcd          21100/tcp
listen          2766/tcp        serve   # lpNet  listener port
snmp            161/udp         # snmp agent query port
snmp-trap       162/udp         # snmp manager trap port
```

You can make these changes using **sysadm**. For more information about the services file, consult the *services(4)* man page or *Managing TCP/IP on the DG/UX™ System*.

/etc/inetd.conf.proto

The **/etc/inetd.conf.proto** file contains a new entry for the **finger** server. If you want **finger** service you should add the following line to your **/etc/inetd.conf** file.

```
finger stream tcp nowait nobody /usr/sbin/in.fingerd in.fingerd
```

You can make these change with **sysadm**. For more information about the **inetd.conf** file consult the **inetd.conf(4)** man page or *Managing TCP/IP on the DG/UX™ System*.

/etc/tcpip.rclinktab.proto

The **/usr/sbin/init.d/rc.links** command uses the **/etc/tcpip.rclinktab** file to create the run-level links in the **/etc/rc***N***.d** directories, where *N* is run level, i, S, or 0 through 6. Minor changes made to the **/etc/tcpip.rclinktab.proto** file allow users to restart the network by changing run-levels from level 3 to 1 then back to 3. If you modified the **/etc/tcpip.rclinktab** file you should compare your existing 4.3x file to the 5.4 prototype file and make changes as you see fit. If you have not modified the **/etc/tcpip.rclinktab** file, you can update the links by executing the commands show below as root.

```
cd /etc
rm /etc/rc*.d/*tcpip*
cp tcpip.rclinktab.proto tcpip.rclinktab
/usr/sbin/init.d/rc.links -LN /etc/tcpip.rclinktab
```

For more information about run levels, see *Managing the DG/UX™ System*.

9 Preparing a Software Trouble Report (STR)

Chapter 7 of *Managing TCP/IP on the DG/UX™ System* contains hints for troubleshooting problems you may encounter while using DG/UX TCP/IP. If you are experiencing problems on your system you may want to consult this chapter to see if it can help you determine the cause.

If you believe you have found an error in the TCP/IP package or the documentation, or if you have a suggestion for enhancing or improving the product, use a Data General Software Trouble Report (STR) to communicate this information to DG.

The DG/UX release notice contains a detailed description of the procedure to use in filing a STR for any DG/UX related problem. Please follow the instructions provided in the DG/UX release notice to provide the basic problem information. You can find a copy of the DG/UX release notice in **/usr/release/dgux_5.4.rn**. Additionally you should provide the information requested in the online STR form located in **/usr/release/tcpip_str_form**. Since networking problems are often due to interoperability issues, it is important for you to provide as much detail as possible about the network environment.

<p align="center">End of TCP/IP Release Notice</p>