COMPAQ

DSNlink Version 2.3E for Tru64 UNIX Release Notes

These release notes describe new features in this version of DSNlink. The notes also list fixed problems from DSNlink Version 2.3 and the current known bugs.

October 7, 1999

Revision/Update Information:	This is a revised manual, which supersedes all previous versions.
Operating System and Version:	Compaq's Tru64 UNIX® Version 5.0.
Software Version:	DSNlink Version 2.3E

October 7, 1999

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Contents

Preface vii

1 What's New in This Version

1.1 The Code Is Year 2000 Ready 1–1
1.2 A New Command Displays the DSNlink Version Number 1–1
1.3 Modem Changes and Additions 1–1
1.3.1 New Modem Scripts 1–1
1.3.2 Modem Scripts Have Been Changed and New Ones Added 1–2
1.3.3 Modem Error Recovery Improved with New Protocol 1–3
1.3.4 dsnmmgr show line Command Includes HDLC Information 1–3
1.3.5 The dsnmmgr zero line Command Resets the HDLC Counters 1–5
1.4 Mail Changes 1–5
1.4.1 New Mail Parameters for Cross-Platform Consistency 1–5
1.5 Network Exerciser Changes 1–6
1.5.1 Pipeline Depth Can Be Adjusted for the Network Exerciser 1–6
1.5.2 Network Exerciser Shows Message Transfer Rate in Baud 1–7
1.6 Service Request Application Changes 1–7
1.6.1 You Can Mail Yourself the Service Request Augmentation Confirmation 1–7
1.7 Enhancements 1–8
1.7.1 Options for the dsnmmgr test Command 1–8
1.7.2 ITS Inactivity Timer Is Suspended During an Extraction Process 1–8
1.7.3 No Long Pause After Exiting ITS 1–9
1.7.4 DSNlink Version Number Added to Logs 1–9
1.7.5 Modem Initialization Includes the Modem Script Name in Logs 1–9

2 Fixed Problems

2.1 Communications and Networking Fixes 2–1
2.1.1 The X.25 Transport Did Not Work with X.25-Routers 2–1
2.2 File Copy 2–1
2.2.1 The Delete Option Was Not Recognized 2–1
2.2.2 Supportcenter Option Was Ignored by dsncopy 2–2
2.2.3 Server Log Files Had Debugging Information 2–2
2.2.4 The MPH Tool Did Not Submit Files for Processing Correctly 2–2
2.2.5 Analysis Tools Required a Service Request Number 2–2
2.2.6 File Copy Ignored the Local Authorizations File 2–2
2.3 ITS 2–2
2.3.1 Erroneous JACKETMSGCORRUPT Errors Fixed 2–3
2.3.2 Quitting a Database Listing Took a While 2–3
2.3.3 ITS Ignored Settings for Pagination, View, and Highlight 2–3
2.4 Modem Transport 2–3
2.4.1 Improved Messages 2–3

2.4.2 Modem Wire Test Generated Device Errors 2–4
2.4.3 Modem Scripts Could Loop 2–4
2.4.4 Modem Connections Failed 2–4
2.4.5 Modem Links Were Stuck 2–4
2.5 Fixes to Multiple Applications 2–4
2.5.1 Missing Quotation Mark Caused a DsnBufferBase Index Error 2–5
2.6 Service Request Application Fixes 2–5
2.6.1 The Supportcenter Option Was Ignored by Some Commands 2–5
2.6.2 Erroneous Mail Prompt After a Submitting Service Request 2–5
2.6.3 Request for Unavailable Closed Service Requests Hangs the Window 2–5
2.6.4 Service Request Application Ignored Local Authorizations File 2–6
2.6.5 Service Request Application Stopped After Connection Errors 2–6

3 Known Problems and Restrictions

3.1 Restrictions 3–1
3.1.1 The Year Part of Dates Must Have Four Digits 3–1
3.1.2 The Modem Must Be Started from a Privileged Account 3–1
3.1.3 The Editor Must Be Invokable in Read-Only Mode and a Full Path Defined 3–1
3.1.4 The Modem Transport Is Supported on the Gateway Only 3–1
3.1.5 Mosaic Version 2.4 Does Not Save Some Help Files 3–2
3.1.6 Mosaic Cannot be Invoked if the Documentation Subset is Not Installed 3–2
3.1.7 Using mailsetup(8) To Do a "Quick Setup" Disallows DSNlink Mailing Lists and Flash Mail 3–2
3.2 File Copy Problems 3–2
3.2.1 File Copies by Specialists from a Customer’s System Are Not Supported 3–2
3.2.2 History Log Does Not Have Outgoing File Copy Records 3–3
3.3 Installation, Communication, and Configuration Problems 3–3
3.3.1 The Deinstallation Procedure Does Not Remove X.25 Entities 3–3
3.3.2 Recreating the Route Map Does Not Remove the X Flag 3–3
3.3.3 Modem Line Appears to Start When Attempted by a Nonroot User . . 3–3
3.3.4 Modem Daemon Does Not Detect a Hangup from a tty Port 3–3
3.3.5 Command Line Fails When Using dxdsn -display 3–4
3.4 Interactive Text Search (ITS) Problems 3–4
3.4.1 Reading Some Articles Results in an Internal Exception 3–4
3.4.2 Beginning and Ending Dates Find Unexpected Articles 3–4
3.5 Mail Problems 3–4
3.5.1 You Cannot Reply to Communique Mail from Compaq 3–4
3.5.2 A Mail File Cannot Be Restored from the Pulldown Menu 3–5
3.6 Maintenance or Multiple Application Problems 3–5
3.6.1 History Log File Does Not Show Some Rejected Applications 3–5
3.6.2 A History Log File Created by DSNlink Has Wrong Permissions 3–5
3.7 Modem Problems 3–6
3.7.1 Modem Reset Phase Is Lengthened During Simultaneous Connections 3–6
3.8 Network Exerciser Problems 3–6
3.8.1 Defining DSNGATEWAY_TRACE Results in Transport Error 3–6
3.8.2 The Network Exerciser Does Not Support the LZW_DYN Compression Option 3–7
3.8.3 Error Messages Overwrite Statistics Report 3–7

3.8.4 The Network Exerciser Has Not Implemented Mirror Options or Language Recognition 3–7
3.9 Service Request Application Problems 3–7
3.9.1 Some Routing Code Descriptions Are Displayed Twice 3–7
3.9.2 Problem Description Lines Over 255 Characters Are Truncated 3–8

4 Starting DSNlink and Getting Help

4.1 Starting DSNlink 4–1
4.2 A Guide to the Documentation 4–1
4.3 Getting Help 4–1

Index

Tables

1 Manual Conventions vii
1–1 Modem Scripts 1–2

Preface

This document explains:

- The new features of DSNlink Version 2.3E
- Fixed problems in earlier versions
- Restrictions and known bugs
- The documentation and how to start DSNlink

Overview

The DSNlink software is a service tool that provides electronic communication capabilities between customers' systems and a Compaq Customer Support Center. Using DSNlink, customers can send electronic service requests and receive help from Compaq specialists. Customers can also use DSNlink to search Compaq's technical support databases for information about products for which they have service contracts.

Intended Audience

The audience for this document is anyone who uses DSNlink.

Conventions Used in This Document

This document uses the conventions listed in Table 1, as needed:

Table 1 Manual Conventions

Convention	Description
UPPERCASE and lowercase	DSNlink parameters and other file entries are case insensitive. However, command and options are case sensitive. To avoid errors, enter information in examples as shown.
Compaq's DIGITAL UNIX®	Refers to the DIGITAL UNIX operating, which is now owned by Compaq Computer Corporation.
DSNlink	The abbreviated service tool name is used for convenience to refer to the DSNlink Version 2.3 for Compaq's DIGITAL UNIX software.
boldface text	Boldface text is used in examples to show what the user types to contrast that with the results of the command.
`monospace type`	Monospace type designates commands and examples.
%	A percent sign is the default prompt for the C shell.

(continued on next page)

Table 1 (Cont.) Manual Conventions

Convention	Description
#	A number sign is the default superuser prompt.
[ ]	Square brackets indicate you must choose one or more of the parameters or variables within the brackets.
{ }	Curly braces indicate that all parameters or variables within the braces are optional.
. . .	A vertical ellipsis indicates the example continues, but the additional text is not displayed.

1
What's New in This Version

DSNlink Version 2.3E is an engineering change order (ECO) kit. It has the following:

- Support for using the X.25 transport with router nodes
- Bug fixes and enhancements that make its features identical to DSNlink Version 2.2D for OpenVMS

This section explains the new features in DSNlink Version 2.3E.

1.1 The Code Is Year 2000 Ready

Currently: DSNlink Version 2.3 for Compaq's DIGITAL UNIX and this ECO kit are Year 2000 Ready.

This is a Year 2000 Readiness Disclosure of Compaq Computer Corporation. For further information and notices about Compaq's Year 2000 readiness, see this Web site:

http://www.compaq.com/year2000/

1.2 A New Command Displays the DSNlink Version Number

The `dsn version` command has been added to this kit to display the DSNlink version number. For example:

```
% dsn version
DSNlink V2.3E for Compaq Tru64 UNIX
```

1.3 Modem Changes and Additions

The following are changes and additions to the modem transport or to modem support.

1.3.1 New Modem Scripts

The modem scripts supplied in DSNlink Version 2.3 for Compaq's DIGITAL UNIX have been updated. Table 1–1 shows the changes.

Table 1–1 Modem Scripts

Modem	DSNlink Version 2.3 Scripts	DSNlink Version 2.3D Scripts	Change
Codex 2264	co2264.ddsf_src	co2264.ddsf_src	No changes. The script for software flow control.
		co2264hw.ddsf_src	The script for CTS/RTS hardware flow.
DIGITAL DF196	df196.ddsf_src	df196.ddsf_src	No changes.
DIGITAL DF296	df296.ddsf_src	df296.ddsf_src	No changes.
Hayes	ha288.ddsf_src	hayes.ddsf_src and hayeshw.ddsf_src	Scripts for Hayes and Hayes-compatible modems. The scripts are for software and hardware flow control. See also Section 1.3.2.
Multi-Tech 1432 Multi-Tech 1932 Multi-Tech 2834	mt1432.ddsf_src mt1932.ddsf_src mt2834.ddsf_src	multimodem.ddsf_src	Individual scripts for Multi-Tech modems 1432, 1932, and 2834 now have one script for XON/XOFF software flow control. The scripts have several improvements. See also Section 1.3.2.
		multimodemhw.ddsf_src	The script for CTS/RTS hardware flow control for Multi-Tech modems 1432, 1932, and 2834.
		multimodemhw_eu.ddsf_src and multimodem_eu.ddsf_src	Scripts for European Multi-Tech modems.
Null modem	null.ddsf_src	null.ddsf_src	No changes. The script is for testing purposes.
U.S. Robotics	none	usrobotics.ddsf_src and usroboticshw.ddsf_src	Scripts for 3Com U.S. Robotics modems, software and hardware flow control.

The scripts are in the directory /usr/lib/dsn/modem/.

Note that new or modified scripts may become available in the future. The latest modem scripts are available from the following website:

http://www.service.digital.com/dsnlink/modem_scripts.htm

1.3.2 Modem Scripts Have Been Changed and New Ones Added

The following changes have been made to support additional Hayes and Hayes-compatible modems:

- Previously there was one script for the Hayes OPTIMA 288 modem. In DSNlink Version 2.3, there are two scripts: hayes.ddsf_src, for software (XON/XOFF) flow control, and hayeshw.ddsf_src for hardware (CTS/RCS) flow control. These scripts dial most Hayes modems. The scripts may require modifications for some Hayes and Hayes-compatible modems.
- The command &K4 now specifies XON/XOFF flow control. Previously, the commands &K2 and &K4 could be used for XON/XOFF flow control, but some modems only accept &K4. The older DSNlink Version 2.3 for Compaq's DIGITAL UNIX script used &K2.
- The scripts operate in verbose mode. This allows them to handle newer modems as they are developed without rewriting the scripts.

- When dialing out there was a timing problem between the issuance of the CONNECT... message and the raising of the DCD signal, which caused the connect message to not be seen and dialing attempts failed. This problem is fixed in the current scripts.

The Multi-Tech modem scripts have these changes:

- Previous scripts for individual Multi-Tech modems have been removed. The new, generic, Multimodem scripts are for Multi-Tech 1432, 1932, and 2834 series modems. One script is for software flow control, the other for hardware flow control.
- Scripts operate in verbose (word) mode. This allows them to handle newer modems as they are developed without rewriting the scripts.
- Scripts have been added for European Multi-Tech modems. They are multimodemhw_eu.ddsf_src and multimodem_eu.ddsf_src. Previously, European Multi-Tech modems required changes to the multimodem.ddsf_ src modem script.

If you have a previous version of DSNlink and your Hayes or Multi-Tech script continues to function well, save them before installing DSNlink Version 2.3E. The new scripts will replace the DSNlink Version 2.3 scripts if they have the same name.

Scripts have been added for U.S. Robotics modems. The scripts are usrobotics.ddsf_src and usroboticshw.ddsf_src.

1.3.3 Modem Error Recovery Improved with New Protocol

Previously: When modem connections failed, the majority of the failures were due to data overruns between the DTE device and the modem. Flow control did not work properly. Errors were detected but not corrected.

Currently: Modem connection problems due to data overruns have been significantly reduced with a new error recovery protocol. Errors are detected and corrected.

1.3.4 dsnmmgr show line Command Includes HDLC Information

Previously: The `dsnmmgr show line` command did not include information about the HDLC layer.

Currently: The `dsnmmgr show line -statistics` command includes information about the HDLC (high-level data link control) component. For example:

```
line_000         LIS   A/B  0/10 m/pstn.719-555-/1212    //
    Frames Sent:            0  Frames Read:                0
    Frame Discards:         0  Protocol Discards:          0
    Local Busy:            No  Remote Busy:               No
    Ack Timer (msec):    3000  Backoff Timer (msec):    1000
    Max Retries:            7  Sequence Modulus:           8
    Retransmits:            0  Bad Sequence Errs:          0
    FCS Errors:             0  Destuff Errors:             0
    Read Overruns:          0  Write Overruns:             0
    Length Errors:          0  Protocol Count Unk:         0
    Acknowledge Fails:      7  Protocol Count AES:        21
    Unexpected Hangups:     0  Protocol Count DSN:       123
```

Where the fields are:

- **Frames Sent:** The number of HDLC data frames sent across the modem to the remote system. It does not include retransmitted frames, acknowledgements, or any control frames.
- **Frames Read:** The number of HDLC data frames correctly read by the daemon. It does not include retransmitted frames, acknowledgements, frames with errors, or any control frames.
- **Frame Discards:** The number of frames received and discarded because they were the wrong type. There is no threshold that indicates a problem.
- **Protocol Discards:** The number of frames received that were discarded because they were for the wrong protocol. There is no threshold that indicates a problem.
- **Local Busy:** Indicates if the local daemon is busy and cannot accept more data from the remote system.
- **Remote Busy:** Indicates if the remote daemon is busy and cannot accept more data from this local daemon.
- **Ack Timer (msec):** The maximum time to wait for an acknowledgement of a delivered frame before either giving up or retransmitting the frame.
- **Backoff Timer (msec):** The time to wait before retrying the transmission of a frame if the local DTE device is overrun with data.
- **Max Retries:** The maximum number of times to resend a frame before giving up.
- **Sequence Modulus:** Indicates the number of times a frame had to be retransmitted to a remote system.
- **Bad Sequence Errs:** Indicates the number of times a frame was received with an incorrect sequence number.
- **FCS Errors:** The number of frames received that did not pass the Cyclic Redundancy Check (error checking). These frames were garbled during transmission. It indicates noise on the line.
- **Destuff Errors:** The number of frames that, when protected (data transparent) bytes were expanded, contained illegal expansion codes.
- **Read Overruns:** Indicates the number of times an incoming data frame overran the input capacity of the DTE device or system's read buffers.
- **Write Overruns:** Indicates the number of times an outgoing frame overfilled the output buffering capacity of the DTE device or related components, such as terminal servers.
- **Length Errors:** Indicates the number of frames received that were either too short or too long.
- **Acknowledge Fails:** The number of times acknowledge failures occur, which happens when data is not successfully received during transmission. One cause of high counts is noise on the modem line.
- **Protocol Count Unk, Protocol Count AES, Protocol Count LAPB, and Protocol Count DSN** Counts the number of connections by protocol type.

The fields are not reset when the modem line disconnects. The numbers continue to accumulate until the line is stopped or you issue the `dsnmmgr zero line` command.

The `dsnmmgr show line` command now also includes the HDLC protocol field. The HDLC's protocol appears when the line is in the ONLINE state. Otherwise, the field has —/— for a value. For example:

```
Information for modem line line-000:
------------------------------------
  Description:      US Robotics Sportster 33.6k Faxmodem
  Device Node Port: lta9811  dsnlink_2  port_4
  DTE Speed:        19200
  Device Location:  Local
  Line Type:        pstn
  Script:           hayeshw
  Subnet Reliable:  No
  On Commbox:       mba2091
  Current State:    ONLINE
  Curr/Allow Mode:  Answer/Both
  Curr/Max Links:   0/10
  HDLC protocol:    DSN/Server
  LNA:              m/pstn.719-555-1212/
  DNA:              //
  RNA:              //
  Last Used Link:   0
  Work List Depth:  0
  Age From Create:  502358
  Age Last Morph:   502311
```

1.3.5 The dsnmmgr zero line Command Resets the HDLC Counters

The `dsnmmgr zero line` command has been added to reset the counter fields to zero in the HDLC statistics display for a modem line. The display appears when you enter the `dsnmmgr show line -statistics` command. For more information about the display, see Section 1.3.4.

1.4 Mail Changes

1.4.1 New Mail Parameters for Cross-Platform Consistency

Customers who have DSNlink running on various operating systems can use the same parameters on each system to specify who gets communique mail from DIGITAL. The parameters are:

- Mail.Flash
- Mail.Informative
- Mail.Marketing
- Mail.Surveys

These parameters appear in DSNlink Version 2.2 for Windows 95 and Windows NT in the DSNlink Control Panel, the Configuration Parameters tab, when the Configuration Parameter Type (the box appears at the top of the sheet) is DSNlink Mail.

On OpenVMS systems, you can add the parameters to the configuration file, DSN$DATA:DSN_CONFIG.DAT. For example:

```
.
.
.
# DSNlink Mail field defaults
#
#Mail.ReplyTo:                  none
#Mail.SendTo:                   none
#Mail.CC:                       none
File.Mail.Signature:            DSN$MAIL_SIGNATURE
Mail.Flash                 s-gregory@sparkle.com,lincoln@sparkle.com
Mail.Informative           s-gregory@sparkle.com
Mail.Marketing             s-gregory@sparkle.com
Mail.Surveys               s-gregory@sparkle.com
```

If you do not define the parameters in the configuration file, DSNlink uses the definitions of the logical names DSN$MAIL_FLASH_RECIPIENT, DSN$MAIL_INFORMATION_RECIPIENT, DSN$MAIL_MARKETING_RECIPIENT, and DSN$MAIL_SURVEY_RECIPIENT to send communique mail.

On UNIX systems, add and define the parameters in the configuration file /usr/lib/dsn/config/.dsnrc. For example:

```
.
.
.
# DSNlink Mail field defaults
#
#Mail.ReplyTo:              none
#Mail.SendTo:               none
#Mail.CC:                   none
#File.Mail.Signature:       DSN$MAIL_SIGNATURE      # OpenVMS
#File.Mail.Signature:       /usr/lib/dsn/config/dsn_mail_signature.txt
# UNIX
Mail.Flash                 s-gregory@sparkle.com lincoln@sparkle.com
Mail.Informative           s-gregory@sparkle.com
Mail.Marketing             s-gregory@sparkle.com
Mail.Surveys               s-gregory@sparkle.com
```

If you do not define the parameters in the .dsnrc file, DSNlink uses the mail recipients you define using the DSNlink Setup utility, menu item l: Edit the mailing lists.

Note that communique mail is only sent to the first system in ASCII sort order in the route map. To change the system that receives communique mail, see section 3.7.1, Creating a Receiver Node for ECOs, in the *DSNlink User's Guide for the DECwindows Interface*.

1.5 Network Exerciser Changes

1.5.1 Pipeline Depth Can Be Adjusted for the Network Exerciser

You can now adjust the pipeline depth in the Network Exerciser using the command `dsnnetex -depth n` where `n` is 1 to 127. Pipeline depth is the maximum number of unacknowledged messages sent to the host. Adjusting the pipeline depth is useful for troubleshooting network congestion, which might occur if you run multiple DSNlink applications at the same time.

This example makes the pipeline depth 49 messages:

```
% dsnnetex -depth 49
```

The default pipeline depth is 7.

This option has not been implemented in the Network Exerciser window in the DECwindows Motif interface. It is available from the command line interface only.

1.5.2 Network Exerciser Shows Message Transfer Rate in Baud

Previously: The Network Exerciser measured the message transfer rate in bytes per second (Bps).

Currently: The message transfer rate is now closer to the baud rate. The change appears in the Network Exerciser window and in the command line interface for the `dsnnetex` command in the Results of Test section. The label "Bps Average Transfer Rate" is now "baud Effective Transfer Rate" in the DECwindows Motif interface. In the command line interface, the label is e-baud. For example:

```
% dsnnetex
DSNlink V2.3D for Tru64 UNIX Network Exerciser Utility
Copyright (c) 1989, 1998 by Digital Equipment Corporation
Digital Equipment Corporation Proprietary Service Tool
All Rights Reserved

Connecting to target cscabc.digital.dsn.  Please wait...
Connection established.
Connection path used:
  Encounter #0
.
.
.
Testing complete.
        Messages Sent:      100
        Messages Read:      100
        Messages Good:      100
        Messages Bad:         0
        Bytes Sent:       50825
        Bytes Read:       50825
        Bytes Good:       50825
        Bytes Bad:            0
        e-baud:           92409
```

1.6 Service Request Application Changes

1.6.1 You Can Mail Yourself the Service Request Augmentation Confirmation

Previously: When you augment a service request, you could not mail yourself a copy of the confirmation message.

Currently: You can now mail yourself a copy of the confirmation message when you augment a service request. If you use the DECwindows Motif interface, when you complete the augmentation, a message box appears with the confirmation message. If you click on Mail in that box, DSNlink mails you a copy of the message. If you use the command line interface, you can add the -mailconfirm option to the `dsnaug` command to send yourself the confirmation message. The command has this format:

```
% dsnaug -s "subject of the request" \
service-request-number details-file -mailconfirm
```

1.7 Enhancements

The following enhancements appear in DSNlink Version 2.3E.

1.7.1 Options for the dsnmmgr test Command

Options have been added to the `dsnmmgr test` command. The `dsnmmgr test` command allows you to test your modem line. The new options are:

- -line

  The -line option gets values for the device, line type, location, node, port, script, and speed from the file /usr/lib/dsn/modem/dsn_modem_devices.dat so that you do not have to supply them in the command. You must specify the modem line's name, for example:

  ```
  # dsnmmgr test dial -line line-000
  ```

  You can override individual values from the /usr/lib/dsn/modem/dsn_modem_devices.dat file by entering the qualifier and the value you want on the command line. For example, to use all the values for line line-000 but override the speed, enter this:

  ```
  # dsnmmgr test dial -line line-000 -speed 38400 ...
  ```

  Note that most `dsnmmgr test` commands require the dialed network address (DNA) option. Because the DNA is not in the dsn_modem_devices.dat file, you must specify it. A complete command example follows:

  ```
  # dsnmmgr test dial -line line-000 -dna m/719-555-1234
  ```

- -verbose

  This option displays the test parameters for confirmation before the test begins. For client tests of the WIRE, DIAL, HDLC, and API levels, a message reminds the tester to start the test server before doing the client test. Verbose is enabled by default. Disable it by entering -noverbose.

The `dsnmmgr test wire` command now accepts the -speed option for the DTE speed. Also, -speed permits a flow control specifier. Append the letter H to the speed to specify RTS/CTS (hardware) flow control. For example:

- To specify 19200 baud with XON/XOFF flow control:

  ```
  # dsnmmgr test wire -speed 19200
  ```

- To specify 19200 baud with RTS/CTS flow control:

  ```
  # dsnmmgr test wire -speed 19200h
  ```

Note: The flow control type works for hardwired ports (direct attachments) only. Terminal server ports do not appear to accept the flow control change although they do accept the speed change. Therefore, for a terminal server (LAT), manually set the flow control type on the terminal server port.

1.7.2 ITS Inactivity Timer Is Suspended During an Extraction Process

Previously: When using ITS to extract a long article to a file, if the process took more than 15 minutes, the inactivity timer closed the ITS session before the download was complete.

Currently: The inactivity timer is suspended during an extraction process.

1.7.3 No Long Pause After Exiting ITS

Previously: When exiting ITS, there was a long pause before the system prompt appeared.

Currently: The long delay in exiting ITS has been shortened.

1.7.4 DSNlink Version Number Added to Logs

Previously: The DSNlink version number did not appear in history log records and error tracing messages.

Currently: DSNlink output, such as Gateway layer traces and history log records, now include the DSNlink version in the platform information.

1.7.5 Modem Initialization Includes the Modem Script Name in Logs

Previously: When a modem line was initialized, the modem script was not recorded in the logs or included in messages.

Currently: The name of the modem script is included in messages and log files. For example:

```
Initializing modem on line line-000 with script HAYESHW...
```

The message is visible on the screen when you initialize the modem you use with DSNlink, and it appears in the DSNlink startup log file.

2
Fixed Problems

The following problems existed in DSNlink Version 2.3 for Compaq's DIGITAL UNIX. They have been fixed in this release.

2.1 Communications and Networking Fixes

The following are fixes to the route map generator and other networking problems.

Important

This release allows your DSNlink systems to use X.25 router nodes with these restrictions:

- Your Compaq Customer Support Center must also install DSNlink Version 2.2E on the DSNlink host.
- If the Compaq host installs DSNlink Version 2.2E, it cannot make X.25 connections to your systems unless they also run DSNlink Version 2.3E.

Contact your Customer Support Center to coordinate your DSNlink Version 2.3E installation with the host's DSNlink Version 2.2E installation.

2.1.1 The X.25 Transport Did Not Work with X.25-Routers

Previously: The X.25 transport did not work with DSNlink if you used an X.25-router. If you configure X.25 and a router is involved, the connection to Compaq appears to work. However, the host could not connect to your system to reply to communications, and, therefore, several functions did not work.

The X.25 transport worked if the X.25 nodes are local. When all the X.25 nodes are local, the host could use X.25 to respond to your communications.

Currently: DSNlink can communicate through X.25 router nodes. The local DTE address is now sent across as the first message. This should bypass any network problems where routers remove the address and/or subaddress.

2.2 File Copy

The notes in this section are fixes to the File Copy application.

2.2.1 The Delete Option Was Not Recognized

Previously: When you attempted to delete your copy of a file after copying it to Compaq, the -d option was not recognized.

Currently: The -d option is now recognized and deletes your copy of the file after it is successfully copied.

2.2.2 Supportcenter Option Was Ignored by dsncopy

Previously: The `dsncopy` command did not use the Support Center specified in the -S option. In the following example, DSNlink used the Support Center listed in your configuration file and not the Support Center CSCABC:

```
% dsncopy -S CSCABC file-name service-request-number
```

Currently: If you specify a Support Center in the option -S, the `dsncopy` command uses it. Note that you must have previously arranged for access to the Support Center for the connection to succeed.

2.2.3 Server Log Files Had Debugging Information

Description: File Copy server log files, /usr/lib/dsn/logs/dsn_file_server.log, contained debugging information in addition to the file copy records. The files are created when specialists copy files to your system.

Currently: The log files no longer contain the debugging information.

2.2.4 The MPH Tool Did Not Submit Files for Processing Correctly

Previously: The Monitoring and Performance History (MPH) analysis tool did not submit files for processing on the host. Messages similar to the following appear:

```
% dsncopy -t AMS filename
 .
 .
 .
--- Error in file transfer job
  - Remote procedure call error
  - Failed to create session to server SRQ$AMS/cscabc/dsn_file
  - Authentication failure
  - Operation failed
  - Key file not found: DSN$KEYS:MD5-XR39-SRQ$AMS
```

Currently: This procedure now works correctly and submits files for processing by MPH. MPH is a service offered by some Customer Support Centers.

2.2.5 Analysis Tools Required a Service Request Number

Previously: The Analysis Tool option did not work unless you supplied a service request number.

Currently: This problem has been fixed. You do not need a service request number to use analysis tools.

2.2.6 File Copy Ignored the Local Authorizations File

Previously: File Copy ignored the local authorizations file and allowed all DSNlink users to use File Copy.

Currently: File Copy processes the statements for its application ID, dsn_file, in the local authorizations file, /usr/lib/dsn/config/dsn_local_auth.dat.

2.3 ITS

The following problems with the Interactive Text Search application (ITS) have been fixed.

2.3.1 Erroneous JACKETMSGCORRUPT Errors Fixed

Previously: The host software caused JACKETMSGCORRUPT errors such as these:

```
Message not found: JACKETMSGCORRUPT
Message not found: DsnIts::SESSION_FAILED
```

Currently: The reasons for the messages and ITS session failures had many causes. All erroneous causes of this error have been fixed.

2.3.2 Quitting a Database Listing Took a While

Previously: If you had access to many databases, and you entered the `show database` command and then quit the listing, the quitting process took a long time because the server continued to send the entire database list.

Currently: This is fixed. The server now processes the interrupt message and stops sending the database listing at the quit point.

2.3.3 ITS Ignored Settings for Pagination, View, and Highlight

Previously: ITS ignored the settings for pagination, view, and highlight. Pagination was always on, view could not be set so that articles always appeared in an editor, and highlight was always on, which highlights the query words in articles.

Currently: You can change the default settings in the configuration file or during the ITS session.

2.4 Modem Transport

2.4.1 Improved Messages

Messages from using the modem with DSNlink have been improved as follows:

- Some messages from running modem scripts were unclear or unnecessary. For example:

```
--- dconn->Connect(): DsnModem::DIAL_LAYER_FAIL, Error from dialer layer
  - General or Undefined dial error: DsnModem::DIAL_ERROR, Error dialing
      modem, not retryable
  - Outgoing dial attempt: DsnDDSFError::DIALERR, Modem dialing error
  - Outgoing dial attempt: DsnDDSFError::ERRORINFO, Script line #0
        Modem speed 0
        Datalink protocol
  - ESUCCESS, Error 0 occurred.
```

  Misleading messages from ERRORINFO and ESUCCESS exceptions have been removed.

- Time stamps with the date now appear every 12 hours in the modem daemon run log. Previously, the date never appeared.

- Additional messages appear when an application makes a connection.

  Messages have been added to indicate if the local daemon must idle the line, dial the modem, or if the dialing fails, how it failed.

  This is an example of a successful connection with new messages:

```
Connecting to target doorknob.digital.dsn.  Please wait...
Attached to line line-000 for connection to m/pstn.719-592-9808/dsn_nsd
  Local modem line responding, waiting for remote connection
  Resetting (idling) the line.                 <=== New
  The line is not connected.  Dialing now ...  <=== New
  The dialup HDLC connection is established.   <=== New
  Remote side responding, waiting for remote server
  Remote server responding
Connection established.
```

2.4.2 Modem Wire Test Generated Device Errors

Previously: The `dsnmmgr test wire` command generated a device error message such as the following:

```
# dsnmmgr test wire -device lta99 -node dsnlink_9/ -
-port port_9 -count 10
 .
 .
 .
Test for DsnModem layers
========================

Establishing connection, please wait...
Connection established
Sending 10 loopback messages of size 0 to 4000...
          0 messages,  2689/
--- DsnModem::DEVERR, Error on device <Null>
```

Currently: This problem has been fixed.

2.4.3 Modem Scripts Could Loop

Previously: Several of the modem scripts went into a loop between the script's last two sections when the value 0 was not returned by the modem after receiving the modem-specific commands.

Currently: This problem has been fixed in the affected modem scripts, which are for the Multi-Tech, Hayes, and Codex modems.

2.4.4 Modem Connections Failed

Previously: Modem script errors caused modem connections to fail because not all result codes were trapped and interpreted.

Currently: The scripts have been converted to use verbose mode and to scan for word reason codes. This is a more generic approach and covers all known result types.

2.4.5 Modem Links Were Stuck

Previously: Links sometimes stuck on a modem line in the DONE or ABORT state. This happened when the line was in the ONLINE or LISTENING states.

Currently: This has been fixed.

2.5 Fixes to Multiple Applications

The following fixes applied to more than one DSNlink application.

2.5.1 Missing Quotation Mark Caused a DsnBufferBase Index Error

Description: DSNlink could not start applications if there was a missing closing quotation mark in the final entry of any of the following files:

- dsn_config.dat, the configuration file
- dsn_remote_auth.dat, the remote authorizations file
- dsn_local_auth.dat, the local authorizations file

Currently: Missing end quotation marks no longer cause applications to fail.

2.6 Service Request Application Fixes

The notes in this section are fixes to the DSNlink Version 2.3 for Compaq's DIGITAL UNIX Service Request Application.

2.6.1 The Supportcenter Option Was Ignored by Some Commands

Previously: The following commands ignored the Supportcenter -S option when you included it on the command line:

- dsnaug
- dsncopy
- dsncreate
- dsnfetch
- dsnreview

Currently: When you enter a command, such as `dxdsnfetch -S cscabc.digital.dsn`, the DSNlink Fetch window appears with cscabc.digital.dsn entered in the Support Center field.

2.6.2 Erroneous Mail Prompt After a Submitting Service Request

Previously: After successfully submitting a service request to the host, a prompt appeared asking you to Click Mail for a confirmation message. However, in the command line interface, there is nothing to click on. This is an example of the message:

```
--- Connecting to target cscaui.digital.dsn, please wait...
    --- Connection established
    --- Submitting request to host...
   --- Waiting for response from host...
    --- Response received by host
    --- Request accepted by host.

            Your new service request number is 77777773333NNN

    --- Click Mail to have a confirmation message sent to:
```

Currently: The prompt to Click Mail no longer appears.

2.6.3 Request for Unavailable Closed Service Requests Hangs the Window

Previously: If you attempted to fetch a list of closed service requests from a host that does not provide such lists, an error message window appeared and the process hung. The process had to be stopped from the command line.

Currently: This is fixed. The message explaining that the list is not available disappears when you acknowledge it, and there are no further errors.

2.6.4 Service Request Application Ignored Local Authorizations File

Previously: In the local authorizations file, entries that allow access to the Service Request application, dsn_sra, incorrectly produced "You are not authorized to use this application" messages.

Currently: This has been fixed.

2.6.5 Service Request Application Stopped After Connection Errors

Previously: In the DECwindows Motif interface, when errors occurred connecting to the host followed by the user clicking on something in the window, the application stopped and generated random application termination errors such as the following:

```
DECthreads Last Chance handler: thread 1 exiting on status exception
0x177db005
Exception: Invalid memory address (dce / thd)
```

Currently: This problem has been fixed.

3
Known Problems and Restrictions

3.1 Restrictions

3.1.1 The Year Part of Dates Must Have Four Digits

Restriction: To ensure that DSNlink does not misinterpret dates beginning in the year 2000, you must enter all years with four digits. Previously, you could enter either two or four digits for the year. Without this requirement, DSNlink might interpret the date Jan 01, 01 as January 01, 1901 when the intended date was January 01, 2001.

You enter dates in the following places:

- ITS, when you search for articles based on their last technical review date
- Service requests, when you fetch lists of open or closed service requests based on their dates
- The local and remote authorizations files when you allow or disallow access to DSNlink applications and include the year in the date
- Configuration file parameters that specify a date, such as Its.BeginDate

Some date formats without the year imply the current year. The date formats dd month (01 January), dd-month (01-Jan), and month dd (Jan 01) force the application to use the current year.

If you do not enter a four-digit year, DSNlink displays an error message.

3.1.2 The Modem Must Be Started from a Privileged Account

Restriction: You need to be root or superuser to start the modem daemon.

3.1.3 The Editor Must Be Invokable in Read-Only Mode and a Full Path Defined

Restriction: If you define an editor for use with the Interactive Text Search (ITS) application, you must enter the entire path to the editor and specify an editor that can be invoked in read-only mode. If DSNlink cannot invoke the specified editor, it uses vi.

3.1.4 The Modem Transport Is Supported on the Gateway Only

Restriction: The modem transport can be configured for use only between your DSNlink gateway and the Compaq host. Therefore, you cannot configure the DSNlink modem transport on nodes that connect to a DSNlink gateway.

3.1.5 Mosaic Version 2.4 Does Not Save Some Help Files

Restriction: Mosaic Version 2.4, which is included in the DSNlink kit, cannot save the online help as PostScript files when the LANG environment variable is set to some language/codeset combinations, for example, ja_JP.sdeckanji. If you attempt this operation, a message says "Unable to save document." In some languages the file is saved, but PostScript viewers such as dxvdoc cannot display it, and PostScript printers cannot print it.

This restriction does not apply to the English online help. You can save them as PostScript files.

3.1.6 Mosaic Cannot be Invoked if the Documentation Subset is Not Installed

Restriction: If you install DSNlink and do not install the documentation subset, Mosaic, which displays the online help, cannot be invoked. This is the error message:

```
DsnHelp::display_mosaic_page: cannot exec /usr/bin/dsnmosaic:
No suchfile or directory
DsnHelp::display_mosaic_page: child unexpectedly died:
         ifexited=1
         exitstatus=00000001
         ifsignalled=0
         termsig=-1
```

3.1.7 Using mailsetup(8) To Do a "Quick Setup" Disallows DSNlink Mailing Lists and Flash Mail

Description: If mailsetup(8) is used to perform a quick setup, the DSNlink mailing list entries created in /var/adm/sendmail/aliases are ignored by the newaliases(8) command. The newaliases(8) command issues this error message as it ignores each entry:

```
/var/adm/sendmail/aliases: line n: cannot alias non-local names
```

Furthermore, when the DSNlink system is configured as a mail hub, customers cannot receive flash mail from the Customer Support Center.

Workaround: Reconfigure sendmail to not use a mail hub or use the new Mail.* parameters described in Section 1.4.1.

3.2 File Copy Problems

The following are problems found in the File Copy application.

3.2.1 File Copies by Specialists from a Customer's System Are Not Supported

Description: DSNlink developers intended to allow specialists to copy files from customers' DSNlink systems to the Compaq host, if customers requested that service. This feature was not implemented on the host system. Consequently, specialists cannot copy files from customers' systems even if asked to do so.

However, the kit still contains the directory, /usr/lib/dsn/public/outgoing/, which was intended to be the directory where customers placed files for specialists to copy to the host. Also, there is a configuration file parameter, FileCopy.PullPath, which defines the outgoing files directory. The directory and parameter have no function.

Workaround: No action is required.

3.2.2 History Log Does Not Have Outgoing File Copy Records

Description: The history log file, /usr/lib/dsn/logs/dsn_history.log, does not have records for files you copy to Compaq with the File Copy application. The history log file does record host-initiated file copies.

Workaround: None.

3.3 Installation, Communication, and Configuration Problems

3.3.1 The Deinstallation Procedure Does Not Remove X.25 Entities

Description: If you deinstall DSNlink Version 2.3E, the X.25 entities are not correctly deleted.

Workaround: After performing the deinstallation procedure, which is described in the *DSNlink Version 2.3E for Tru64 UNIX Installation Guide*, stop and then restart X.25 using these commands:

```
# /usr/sbin/x25shutdown
# /usr/sbin/x25startup
```

3.3.2 Recreating the Route Map Does Not Remove the X Flag

Description: After changing Customer Support Centers (CSCs) and rebuilding the route map, the route map entry for the new CSC has an X flag, which prevents connections to that CSC. For example, this is the entry for a new CSC:

```
digital/cscnew  m/pstn.800-222-1111/dsn_nsd     10400   X
```

Workaround: Edit the route map, /usr/lib/dsn/config/routemap, and remove the X flag.

3.3.3 Modem Line Appears to Start When Attempted by a Nonroot User

Description: When a nonroot user enters the `dsnmmgr start line` command, the line appears to start, but does not. This is the message:

```
% dsnmmgr start line
sh: /usr/lib/dsn/logs/dsn_run_pstn_line_000.log: cannot create
Modem line line-000 has started.
Started 1 lines, 0 already running, 0 start errors for specified lines
```

This command shows that the line was not started:

```
% dsnmmgr show line

-- No lines found --
```

Workaround: Become root before starting the modem line.

3.3.4 Modem Daemon Does Not Detect a Hangup from a tty Port

Description: The modem daemon does not detect a line hangup on directly connected tty ports. It detects a hangup correctly on LAT ports.

Workaround: None.

3.3.5 Command Line Fails When Using dxdsn -display

Description: The following command does not create DSNlink windows:

```
# dxdsn -display hostname:0
```

The command dxdsn appears on the display "hostname:0", but all future attempts to create windows from that dxdsn invocation result in a message that includes this error:

```
Error parsing command; syntax error
  <display>.
Command syntax error.
```

Workaround: Do not use this method to invoke DSNlink.

3.4 Interactive Text Search (ITS) Problems

3.4.1 Reading Some Articles Results in an Internal Exception

Description: In the DECwindows Motif interface, when reading some articles in ITS, these messages appear after a few lines:

```
exception system: exiting dues to multiple internal errors:
        exception dispatch or unwind stuck in infinite loop
        exception dispatch or unwind stuck in infinite loop
```

This problem appears in a very few articles.

Workaround: Read the article in the command line interface. The problem does not occur there.

3.4.2 Beginning and Ending Dates Find Unexpected Articles

Description: The Beginning and Ending Date fields and the -beg and -end options, which can be used with database searches, do not work as explained in the documentation. ITS displays articles dated the day after the specified beginning date. It should include articles with the Beginning date. The Ending Date field displays articles with dates on the specified day. It should find articles dated before but not on the Ending date.

Workaround: In the Beginning Date field, or in the -beg option, enter the day before the date you want to use as the beginning date for searches. For example, if you want to find articles dated February 14, 1999, enter February 13, 1998 for the beginning date. Likewise, to find articles dated before but not on a date, enter the day before in the Ending date field or the -end qualifier.

3.5 Mail Problems

The errors in this section pertain to DSNlink mail.

3.5.1 You Cannot Reply to Communique Mail from Compaq

Description: When you receive communique mail from Compaq, such as Flash mail, surveys, and marketing information, if you reply to the mail, DSNlink appears to send the reply, but it is not delivered.

Workaround: Contact Compaq by telephone to respond to mail.

3.5.2 A Mail File Cannot Be Restored from the Pulldown Menu

Problem: If you include a file name when you invoke the DSNlink Mail window, the specified file properly appears in the Message Body window. However, if you delete the file and then try to restore it by choosing its name from the pop-up menu (where the file name is listed), only the file name appears in the Message Body area.

This is an example of a command that includes a file:

```
% dxdsnmail test.txt
```

Workaround: In the DSNlink Mail window, use the Include File... menu item. When you choose the file name using Include File..., the file appears in the Message Body window.

3.6 Maintenance or Multiple Application Problems

3.6.1 History Log File Does Not Show Some Rejected Applications

Description: The history log file, /usr/lib/dsn/logs/dsn_history.log, may not indicate that the host system rejected an application. Rejection occurs when the host system disallows access by applications, usually because the service contract has expired.

When you run the application, such as the Network Exerciser, a message appears that the application is rejected. However, the history log file has this information:

- Network Exerciser–the record's status is CANCEL followed by the test results
- File copy–no record
- Create service request–a failure record
- Fetch service requests–two records, one for failure, one for success
- Review service requests–a failure record
- Service request augmentations–a failure record

A failure record should appear for the application.

Workaround: Contact your Customer Support Center if the application is rejected even if the history record indicates it succeeded.

3.6.2 A History Log File Created by DSNlink Has Wrong Permissions

Description: A system administrator deletes the history log file in /usr/lib /dsn/logs/dsn_history.log but does not create a new one. DSNlink creates a new history log file for the next person to run DSNlink. That person becomes the owner of the file. Therefore, subsequent users cannot use DSNlink because the file's ownership prevents DSNlink from writing records to the file.

Workaround: Become root. Correct the permissions and ownership on the file by starting the DSNlink Setup utility and using menu item g, Specify the DSNlink Group. To start the utility, enter this command:

```
# /usr/sbin/dsnsetup
```

After you enter the group name for DSNlink files, DSNlink changes the file ownership.

3.7 Modem Problems

3.7.1 Modem Reset Phase Is Lengthened During Simultaneous Connections

Description: When customer and host systems make simultaneous connections to each other, for example the host begins a Network Exerciser test at the same time your system initiates a Network Exerciser test, it takes the modem about 12 seconds to reset. It should take one or two seconds.

Workaround: None.

3.8 Network Exerciser Problems

3.8.1 Defining DSNGATEWAY_TRACE Results in Transport Error

Description: If you define the logical name DSNGATEWAY_TRACE to CT to trace connection errors and then run the Network Exerciser, DSNlink has transport errors. For example:

```
zmoon.cxo.dec.com> setenv DSNGATEWAY_TRACE ct
zmoon.cxo.dec.com> dsnnetex
DSNlink V2.3D for Digital UNIX Network Exerciser Utility
Copyright (c) 1989, 1999 by Digital Equipment Corporation
Compaq Computer Corporation Proprietary Service Tool
All Rights Reserved

Connecting to target cscabc.digital.dsn.  Please wait...

DsnGateway::Connect HIT:
        Date:            Sun, 3 Oct 1999 14:43:14 -0600
        Hop Count:       1
        Redirect Count:  0
        State:           CONNREPLY
        Status:          --- DsnGateway::OK, Operation successful
        System ID:       digital/cscabc
        Platform ID:     VMS ZFISH V6.2 0 VAX V2.2D
        Version:         2.37 Rel Network Address: (None)
        Path:   176195/zman|OSF1 zmoon.dec.com V5.0 910 alpha T2.3D-IFT2||T
/zman.dec.com/4421&T/zfish.dec.com/dsn_netex
                digital/cscabc|VMS ZFISH V6.2 0 VAX V2.2D|T/zman.dec.com
/4421&T/zfish/DSN_NETEX|
Connection established.
Stats: M100/100/100/0   B25563/25563/25563/0   e511260
Testing complete.
        Messages Sent:      100
        Messages Read:      100
        Messages Good:      100
        Messages Bad:         0
        Bytes Sent:       25563
        Bytes Read:       25563
        Bytes Good:       25563
        Bytes Bad:            0
        e-baud:          511260
--- DsnGateway::TRANSPORTERR, Transport error: caller =
T/zman.dec.com/4421, callee = T/zfish.dec.com/dsn_netex
  - DsnTransport::END, End of data; connection was abruptly terminated
```

3.8.2 The Network Exerciser Does Not Support the LZW_DYN Compression Option

Description: When you specify the LZW_DYN (dynamic Lempel-Ziv-Welsh) compression algorithm when using the Network Exerciser, a message tells you the operation failed and the LZW_DYN compression option is unsupported.

Workaround: Use the Network Exerciser compression option None to test the effects of compression. If you then click on LZW, DSNlink compresses the Network Exerciser messages the same way it compresses all transferred data.

3.8.3 Error Messages Overwrite Statistics Report

Description: If an error occurs when using the Network Exerciser in the command line interface with the modem transport, the error message overwrites the statistics line. For example,

```
--- DsnTransport::MODEMERR, Modem error982/39982/0   C726
  - DsnModem::LINK_ABORT, Data link aborted by session entity
```

Workaround: If possible, perform the test in the DECwindows Motif interface. If modem errors appear there or when you use other applications, contact your Customer Support Center.

3.8.4 The Network Exerciser Has Not Implemented Mirror Options or Language Recognition

Problem: The mirror clarity items for the Network Exerciser utility are not implemented, except for Pure, which returns bytes without any manipulations. The unimplemented mirror options are: Invert, Reject Always, Reverse, Rotate, and Scratched. Tests with those items selected run as Pure tests. There are no error messages that the items are not implemented.

The Language field is also ignored.

Workaround: None.

3.9 Service Request Application Problems

3.9.1 Some Routing Code Descriptions Are Displayed Twice

Description: When you fetch a list of your routing codes, some of the routing code descriptions appear twice. For example:

```
% dsnfetch routing_codes
DSNlink V2.3D for Digital UNIX Service Request Application
Copyright (c) 1989, 1999 by Digital Equipment Corporation
Compaq Computer Corporation Proprietary Service Tool
All Rights Reserved

--- Connecting to target doorknob.digital.dsn, please wait...
--- Connection established.
--- Waiting for response from host...
--- Response received by host.
--- Requested list has been loaded.
The following list contains the currently valid routing codes you can
use to send service requests to the DIGITAL Customer Support Center (CSC)
for access number 12345.

  DSNlink Routing Code              Routing Code Description
```

```
------------------------------------------------------------------------
  CAD                         Customer Assistance Desk.  Questions or problems
                                pertaining to Contract Discrepancies associated
                                with the registration of software products that
                                are missing or have expired from your contract
                                and can not be viewed via DSNlink Help or DIA
                                menu options.

  DSNLINK                     DSNlink for OpenVMS, DSNlink for ULTRIX and
                                DSNlink for DIGITAL UNIX[R]: Questions with the
                                installation and use of the DSNlink service tool;
                                Modem and phone line connections; Security
                                issues; DSNlink configuration and application
                                management issues.

        DSNlink for OpenVMS, DSNlink for ULTRIX and
                                DSNlink for DIGITAL UNIX[R]: Questions with the
                                installation and use of the DSNlink service tool;
                                Modem and phone line connections; Security
                                issues; DSNlink configuration and application
                                management issues.
```

Workaround: None.

3.9.2 Problem Description Lines Over 255 Characters Are Truncated

Description: If you create a service request in the DECwindows Motif interface and enter the problem description without pressing the Return or Enter keys, even if the text wraps in the window, DSNlink converts the text into a single line. If you view a copy of the service request, the problem description, now a single line, is truncated after 255 characters.

Workaround: When entering a problem description in the Create Service Request Application window, press the Return or Enter key after each line of text. Make sure that lines do not exceed 256 characters.

4

Starting DSNlink and Getting Help

4.1 Starting DSNlink

To display the DSNlink main window, use this command:

```
% dxdsn
```

To use DSNlink in the command line interface, see the online help (use the `dsnhelp` command) for the commands, options, and arguments you need to enter.

4.2 A Guide to the Documentation

DSNlink has no hardcopy documentation. The documentation consists of PostScript and text files you can print and embedded online documentation that is displayed by the Mosaic or Lynx browsers.

The files you can print are:

- *DSNlink Version 2.3E for Tru64 UNIX Service Tool Description*
- *DSNlink Version 2.3E for Tru64 UNIX Installation Guide*
- *DSNlink Version 2.3E for Tru64 UNIX Release Notes*
- The Readme file

For the location of the files, see the Postinstallation chapter of the *DSNlink Version 2.3E for Tru64 UNIX Installation Guide*.

4.3 Getting Help

In the DECwindows interface, use the Help menus or Help buttons to access the online help. It is displayed by the Mosaic browser, which is included in your kit. The Help menu includes the *DSNlink Getting Started*, which shows you how to use the DSNlink applications.

In the command line interface, the `dsnhelp` command displays a list of documents you can access. The information is displayed in the Lynx browser, which is included in the kit.

Index

C

Configuration file
  mail parameters, 1–5

D

Dates
  year format requirement, 3–1
DsnBufferBase Index error, 2–5
DSNlink
  displaying the version number, 1–1
  documentation, 4–1
  enhancements in DSNlink Version 2.3E, 1–8
  overview, vii
  starting, 4–1
  version number in log files, 1–9
dsnmmgr show line, 1–3
dsnmmgr test command
  new -line option, 1–8
dsnmmgr zero line command, 1–5
dsn version command, 1–1
dxdsn -display, 3–4

E

Editors
  invoke in read-only mode, 3–1

F

File Copy
  delete option was not recognized, 2–1
  ignored local authorizations file, 2–2
  MPH did not work properly, 2–2
  no outgoing records in history log, 3–3
  server log files had debugging information, 2–2
  specialists cannot copy files from systems, 3–2
  tools required a service request number, 2–2
File Copy application
  fixed problems, 2–1
  ignored supportcenter option, 2–2

H

HDLC
  new information, 1–3

I

ITS application
  beginning and ending dates, 3–4
  fixed problems, 2–2
  ignored some settings, 2–3
  inactivity timer, 1–8
  JACKETMSGCORRUPT errors, 2–3
  long pause to system prompt, 1–9
  quitting database listing, 2–3
  reading articles result in internal exception, 3–4

L

Log files
  history log file with wrong permissions, 3–5
  some rejected applications not shown, 3–5

M

Mail
  parameters for cross-platform consistency, 1–5
  responding to communiques, 3–4
  restoring from pulldown menu, 3–5
  using mailsetup(8), 3–2
Modems
  appears to start when user is not root, 3–3
  dsnmmgr show line includes HDLC information, 1–3
  error recovery protocol, 1–3
  fixed problems, 2–3
  hangup not detected, 3–3
  initialization includes script name in logs, 1–9
  new options for the dsnmmgr test command, 1–8
  reset phase, 3–6
  script errors, 2–4
  scripts, 1–1
  scripts could loop, 2–4
  start from privileged account, 3–1
  stuck lines, 2–4

Modems (cont'd)
supported on gateway only, 3–1
wire test generated errors, 2–4
Modem transport
dsnmmgr zero line command, 1–5
Mosaic
restriction, 3–2
subset requirement, 3–2
MPH, 2–2
required a service request number, 2–2

N

Network Exerciser
errors after defining DSNGATEWAY_TRACE, 3–6
LZW_DYN compression, 3–7
messages overwrite report, 3–7
message transfer rate in baud, 1–7
mirror options not implemented, 3–7
pipeline depth, 1–6

R

Route map
X flag remains, 3–3

S

Service Request application
closed service requests, 2–5
erroneous mail prompt, 2–5
fixed problems, 2–5
ignored local authorizations file, 2–6
mail confirmation of augmentation, 1–7
problem description truncated, 3–8
routing code descriptions, 3–7
stopped after connection errors, 2–6
Supportcenter option ignored, 2–5
Supportcenter option
ignored by File Copy in CLI, 2–2

X

X.25
deinstallation does not remove entities, 3–3
router node fix, 2–1

Y

Y2K
readiness statement, 1–1