COMPAQ

DSNlink Version 3.0 for Tru64 UNIX Release Notes

These release notes describe new features, fixed problems, and known bugs in DSNlink Version 3.0.

November 4, 2000

Revision/Update Information:	This is a revised manual, which supersedes all previous versions.
Operating System and Version:	Compaq Tru64™ UNIX Version 4.0d, 4.0e, 4.0f, 4.0g, 5.0, 5.0a, or 5.1
Software Version:	DSNlink Version 3.0 for Tru64 UNIX

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This document was prepared using VAX DOCUMENT Version 2.1.

Contents

Preface v

1 What's New in This Version

1.1 There Are Encrypted and Nonencrypted Versions 1–1
1.1.1 About the Kit with Encryption 1–1
1.1.2 About the Kit Without Encryption 1–1
1.1.3 Restrictions on Distribution 1–1
1.2 Improved Authentication 1–2
1.2.1 Changes to Authentication Keys 1–2
1.3 Remote Login Is Enhanced When Using RC4 Encryption 1–3
1.4 Interoperability Between DSNlink Version 3.0 and Previous Versions 1–3
1.5 The *DSNlink Getting Started* Has Been Removed 1–3
1.6 Netscape Replaces the Mosaic Browser 1–3
1.7 The Service Request Application Allows Hours and Minutes in the Beginning and Ending Date Fields 1–3
1.8 New Parameters Allow You to Specify People to Receive Mail from Compaq 1–4
1.8.1 Specifying People to Copy on Incoming Mail from Compaq 1–4
1.8.2 Specifying People to Receive Communique Mail 1–4
1.9 You Cannot Get an Override to the Requirement for a Service Request Number or Analysis Tool with a File Copy 1–5
1.10 You Can Install on Clusters 1–5
1.11 REPKO Modem Scripts Have Been Added to the Kit 1–5

2 Fixed Problems

2.1 Communications and Networking Fixes 2–1
2.1.1 The Domain cpqcorp.net Was Not Recognized 2–1
2.1.2 dsnmapq Did Not Add Entries to the Route Map 2–1
2.1.3 Route Map Access Time Reduced 2–1
2.2 File Copy 2–2
2.2.1 Mail Notification After a File Copy Was Inconsistent 2–2
2.3 Installation Fixes 2–2
2.3.1 Missing dsn_tunneld File 2–2
2.4 ITS 2–2
2.4.1 ECO Request Failed in the DECwindows Motif Interface 2–2
2.4.2 Using an ITS Initialization File Resulted in an ACCVIO 2–2
2.4.3 Customers Could Make Only One ITS Connection with the Modem Transport 2–3
2.5 Multiple Applications Fixes 2–3
2.5.1 Netscape Did Not Display the Online Help After Creating a Lock File 2–3
2.6 Network Exerciser Fixes 2–4

2.6.1 Defining DSNGATEWAY_TRACE Resulted in a Transport Error 2–4
2.6.2 The Verbose Option Had No Effect 2–4
2.7 Service Request Application Fixes 2–5
2.7.1 Some Routing Codes Mistakenly Sent Acknowledgement Mail 2–5
2.7.2 Saving a Fetched List No Longer Causes a Core Dump 2–5
2.7.3 Using mailsetup(8) To Do a "Quick Setup" Disallows DSNlink Mailing Lists and Flash Mail 2–5
2.7.4 The Create Service Request Tutorial Did Not Appear 2–5

3 Known Problems and Restrictions

3.1 Restrictions 3–1
3.1.1 Color Map Problems Result from Color-Intense Applications 3–1
3.1.2 The Year Part of Dates Must Have Four Digits 3–2
3.1.3 The Modem Must Be Started from root 3–2
3.1.4 The Editor Must Be Invokable in Read-Only Mode and a Full Path Defined 3–2
3.1.5 The Modem Transport Is Supported on the Gateway Only 3–2
3.2 File Copy Problems 3–2
3.2.1 File Copies by Specialists from a Customer's System Are Not Supported 3–3
3.2.2 The 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 3–4
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 3–5
3.5.1 You Cannot Reply to Communique Mail from Compaq 3–5
3.6 Maintenance or Multiple Application Problems 3–5
3.6.1 Key Maintenance Window Is Obsolete 3–5
3.6.2 Using eXcursion to Run the DECwindows Motif Interface Causes Application Failures 3–5
3.6.3 The History Log File Does Not Show Some Rejected Applications 3–5
3.6.4 A History Log File Created by DSNlink Has Wrong Permissions 3–6
3.7 Modem Problems 3–6
3.7.1 The Modem Reset Phase Is Lengthened During Simultaneous Connections 3–6
3.8 Network Exerciser Problems 3–6
3.8.1 The Network Exerciser Does Not Support the LZW_DYN Compression Option 3–6
3.8.2 Error Messages Overwrite Statistics Report 3–7
3.8.3 The Network Exerciser Has Not Implemented Mirror Options or Language Recognition 3–7
3.9 Route Map 3–7
3.9.1 The DSNlink Setup Utility Does Not Update the Transport.Outside Parameter or Rebuild the Route Map Correctly 3–7
3.10 Service Request Application Problems 3–7
3.10.1 Some Routing Code Descriptions Are Displayed Twice 3–7

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

Preface

This document explains:

- The new features of DSNlink Version 3.0
- 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.

1
What's New in This Version

1.1 There Are Encrypted and Nonencrypted Versions

There are two DSNlink Version 3.0 kits:

- DSNlink Version 3.0 for Tru64 UNIX

  This version contains encryption ciphers that encrypt all communications by default. It also contains the new authentication methods.

- DSNlink NE Version 3.0 for Tru64 UNIX

  This version has no encryption capability. It does have the new authentication methods that replace MD5.

1.1.1 About the Kit with Encryption

The major enhancement in DSNlink Version 3.0 is the addition of encryption. DSNlink Version 3.0 encrypts messages between your DSNlink system and the Compaq host with industry-standard ciphers. A **cipher** is an encryption /decryption algorithm.

These ciphers are in DSNlink Version 3.0:

- Triple DES 168-bit block cipher (TDES)
- RC5 128-bit block cipher (RC5_128)
- RC4 128-bit stream cipher (RC4_128)
- DES 56-bit block cipher (DES)

Triple DES is the default cipher.

DSNlink Version 3.0 performs end-to-end encryption, which means that messages are encrypted on the sending system and decrypted on the receiving system.

If you use the DECwindows Motif interface, there is no indication that the communication was encrypted except for messages in the window where you started DSNlink. If you use the command line interface, screen messages mention encryption. Similar messages also appear in the server log files.

1.1.2 About the Kit Without Encryption

Not all customers and Compaq hosts can install DSNlink Version 3.0 because of U.S. or local restrictions on the export or import of encryption software. Those sites can install DSNlink NE Version 3.0, which has no encryption code.

1.1.3 Restrictions on Distribution

Exports of the encrypted version of DSNlink are subject to U.S. Export Administration Regulations pertaining to encryption items and may require that the exporter obtain individual export authorization from the U.S. Department of Commerce.

1.2 Improved Authentication

When either your system or the Compaq host initiates a connection, the systems first perform authentication. The goal of the process is for the customer and host systems to verify their identities to each other before establishing a communication connection. The systems must successfully authenticate themselves before either encrypted or nonencrypted messages are exchanged.

Authentication has also been enhanced with the addition of new, stronger, hash-based message authentication code (HMAC) functions. During the authentication process, DSNlink Version 3.0 combines a message with your authentication key, processes the result with industry-standard secure hash functions to generate a hash-based message authentication code (HMAC) for the digital signature. The HMAC algorithm follows RFC 2104 guidelines.

DSNlink Version 3.0 offers the following HMAC authentication methods:

- MD5_V3 uses the MD5 cryptographic hash function to produce a 128-bit signature.
- RMD160 uses the cryptographic hash function RIPEMD–160 to produce a 160-bit signature.
- SHA1 uses the cryptographic hash function SHA–1 to produce a 160-bit signature.
- SR160 uses both of the RIPEMD–160 and and SHA–1 cryptographic hash functions to produce a 160-bit signature. The advantage of this method is that an adversary would have to break both the SHA–1 and RIPEMD–160 functions to break the signature. This is the default authentication method.

The older MD5 authentication method, which produces a 128-bit signature, was used in earlier versions of DSNlink. Your DSNlink Version 3.0 system will use this method if the host system is running an earlier version of DSNlink. This method does not follow RFC 2104 guidelines and is not as secure as the HMAC methods mentioned above.

1.2.1 Changes to Authentication Keys

Existing File Names Are Converted

Previously, DSNlink used only MD5 to authenticate all connections. Both your system and the Compaq host had identical MD5 keys.

In DSNlink Version 3.0, if you have an MD5 key, the installation procedure changes its file name to remove the MD5 and replace it with HMAC. It is a single key for the MD5, SHA–1, RIPEMD–160, and SR160 authentication methods. It has this path and file name format:

/usr/lib/dsn/keys/HMAC-DIGITAL-*access_number*

The contents of the MD5 key are not changed, just the file name.

New Keys Are Longer than MD5 Keys

If you install DSNlink Version 3.0 on a system with no previous versions of DSNlink, you can request a new authentication key from Compaq. The new key is longer than MD5 keys. For example:

3DIGITAL-12345-TVZG-TM4G-7P5A-T3TD-Z9VQ-WQMR-AP3Z-LH3F

MD5 keys have 16 characters after the access number. For example:

0DIGITAL-77777-C172-YUJ9-NCC9-TDPC

1.3 Remote Login Is Enhanced When Using RC4 Encryption

DSNlink Remote Login performance has been improved for slow network connections, especially using the DSNlink modem protocol. However, this improvement is only noticeable when using 128-bit RC4 encryption (RC4_128).

Specialists use 128-bit RC4 encryption when using the Remote Login application. If you prefer 168-bit Triple-DES encryption, modify the Remote Login server's cipher suite in the configuration file by entering and defining the parameter Login.CipherSuite as follows:

```
Login.CipherSuite:      TDES
```

This definition forces the specialist to use Triple DES encryption when logging in. Triple DES adds as much as 6 bytes additional overhead per message. Depending on the transport, a performance slowdown may be noticed by the specialist.

1.4 Interoperability Between DSNlink Version 3.0 and Previous Versions

DSNlink Version 3.0 is compatible with previous versions of DSNlink. You do not have to install DSNlink Version 3.0 on all the DSNlink systems at your site. However, only messages originating on the system with DSNlink Version 3.0 are encrypted.

1.5 The *DSNlink Getting Started* Has Been Removed

The *DSNlink Getting Started* has been removed from the DSNlink Version 3.0 kit. Its information now appears in the *DSNlink User's Guide*.

In the DSNlink main window, where the Getting Started previously appeared on the Help menu, there is now the Index menu item. If you select it, the index to the *DSNlink User's Guide* appears.

When you enter the dsnhelp command for help on the command line interface, the list of documents that appears now has a link to the EMPHASIS>(DSNlink User's Guide) index instead of the *pn* Getting Started).

1.6 Netscape Replaces the Mosaic Browser

Previously, the Mosaic browser displayed the online help for the DECwindows Motif user interface. In DSNlink Version 3.0, Mosaic has been replaced with Netscape, which is included with Tru64 UNIX beginning with Version 4.0.

1.7 The Service Request Application Allows Hours and Minutes in the Beginning and Ending Date Fields

You can now add hours and minutes specifications to the Beginning and Ending dates when you request a list of closed or open service requests. For example, in the Fetch List window, you can click on Open Service Requests, and then enter this date in the Beginning Date field:

31 December 1999 12:59

You can also enter hours and minutes in the command line interface. For example:

dsnfetch open -beginning "31 December 1999 12:59"

DSNlink returns a list that begins with the specified date and time. The time is the Compaq call handling system's time when it received the service request, not the time on your system. Therefore, if your system and the Compaq call handling system are in different time zones, you may need to be aware of the difference if you specify hours with dates.

Similarly, you can also enter hours and minutes in the Beginning and Ending date fields in ITS when you perform a search. The Beginning and Ending date fields accept 32 characters.

1.8 New Parameters Allow You to Specify People to Receive Mail from Compaq

The following sections describe the new configuration parameters in the file /usr/lib/dsn/config/.dsnrc for specifying people to receive mail from Compaq.

1.8.1 Specifying People to Copy on Incoming Mail from Compaq

Previously: You could not copy several people on responses from Compaq on concerning service requests, file copy notifications, or engineering change order deliveries. You could specify people to receive communique mail (flashes, marketing, survey, and information mail) but not other types of mail.

Currently: The configuration file has a new parameter named Mail.Incoming.CC that you can define with a list of people to copy on mail from the Customer Support Center. You must edit the configuration file, /usr/lib/dsn/config/.dsnrc, on all systems that receive mail to specify the mail addresses of the people to receive copies of the incoming mail.

For more information on defining the parameter, see the postinstallation tasks chapter of the *DSNlink Version 3.0 for Tru64 UNIX Installation Guide*.

1.8.2 Specifying People to Receive Communique Mail

Previously: DSNlink provided these mailing lists in /usr/lib/dsn/config/ for communique mail from Compaq:

- DSNlink-Biz — for new products and services
- DSNlink-Flash — urgent product information
- DSNlink-Info — general product information
- DSNlink-Survey — asks for your opinions on Compaq services and product quality

These files are not provided by DSNlink Version 3.0.

Currently: The DSNlink Version 3.0 installation checks for an existing configuration file, /usr/lib/dsn/config/.dsnrc, from previous DSNlink installations, for these parameters:

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

If the parameters do not appear in the configuration file, they are added with a value of root. Therefore, no one gets communique mail from Compaq except for root unless you edit the configuration file to add other recipients.

1.8 New Parameters Allow You to Specify People to Receive Mail from Compaq

If you had earlier versions of DSNlink on the system and had edited the communique mailing lists to add the addresses of people to receive communique mail, those addresses are not transferred to the configuration file. You need to edit the configuration file to add the addresses of recipients of communique mail. For more information, see the *DSNlink Version 3.0 for Tru64 UNIX Installation Guide* where defining the parameters is a postinstallation task.

1.9 You Cannot Get an Override to the Requirement for a Service Request Number or Analysis Tool with a File Copy

Previously, you could override the need for a service request number or an analysis tool with a file copy operation by contacting a Compaq specialist who could grant the override. This is no longer possible. When using the File Copy application, you must supply a service request number or an analysis tool name.

1.10 You Can Install on Clusters

You can install DSNlink on a cluster running Tru64 UNIX Version 5.0a or 5.1 with these restrictions:

- You can use only the TCP/IP transport. Modems, X2.5, and DECnet are not supported.
- You must supply the cluster alias name when the prompt for the DSNlink node name appears in the installation procedure.
- The installation, which you perform once, makes all nodes in the cluster either A nodes or B nodes, depending on which node type you specify during the installation.

The configuration portion of the installation may occur multiple times, for example, three times on a two-node cluster. This does not create any problems or require follow up actions.

1.11 REPKO Modem Scripts Have Been Added to the Kit

Modem scripts for REPKO modems have been added to the kit. The scripts are in /usr/lib/dsn/modem/ and have these names:

- repko_eu.ddsf_src —for European REPKO modems with XON/XOFF flow control
- repkohw_eu.ddsf_src—for the European REPKO modems with RTS/CTS flow control

2
Fixed Problems

The following problems have been fixed since DSNlink Version 2.3E was released. It is the previous version of DSNlink for Tru64 UNIX.

2.1 Communications and Networking Fixes

The following sections describe fixes to improve communications and networking.

2.1.1 The Domain cpqcorp.net Was Not Recognized

Previously: DSNlink did not recognize the domain cpqcorp.net as a Compaq site. If the Compaq host used the domain cpqcorp.net when you attempted a connection to the host, a gateway error occurred.

Currently: This problem is fixed. DSNlink recognizes the domains .cpqcorp.net, .digital.com, and .dec.com.

2.1.2 dsnmapq Did Not Add Entries to the Route Map

Previously: The dsnmapq utility, which allows you to query the route map for entries that match a specified string, did not add entries to the route map. When you attempted to add an entry to the route map, the command was not recognized. For example:

```
% /usr/sbin/dsnmapq -a "test/dsncxo/dsn_nsd"
Usage: /usr/sbin/dsnmapq [flags] domain/node/application  (selects
based on destination)
       /usr/sbin/dsnmapq -d [flags]  (dumps contents of route map in
sorted order)
flags:  -a "entry" = add "entry" to route map file
        -f file    = specify route map filename
        -i rflags  = ignore entries which have rflags set
        -n         = number output lines from query
        -s rflags  = select only entries which have rflags set
        -t [dmtx]  = display only entries which match listed
transports:
                     d = DECnet
                     m = Modem
                     t = TCP/IP
                     x = X.25
```

Currently: The command has been fixed. The -a option now adds an entry to the route map.

2.1.3 Route Map Access Time Reduced

Previously: Large route maps had poor access times on slower systems.

Currently: Access time has been improved by sorting the route map. A sorted route map has this file name:

/usr/lib/dsn/config/routemap-sorted

The sorted route map should reduce access time by about two-thirds. DSNlink creates it as necessary, and it requires no upkeep or monitoring.

2.2 File Copy

The following sections describe fixes to the File Copy application.

2.2.1 Mail Notification After a File Copy Was Inconsistent

Previously: After a Compaq specialist copies a file from the host to your system, you should receive notification mail about the file copy. However, under some circumstances, no notification mail was sent, and the specialist performing the file copy did not know about the notification mail failure.

Currently: This problem has been fixed. DSNlink notifies the person associated with the service request when mail is copied to their system. Rarely, although it can happen, Compaq copies a file to you with no associated service request. In this case, the specialist must have the email address of the person to notify to send notification mail.

2.3 Installation Fixes

The following are fixes to problems with the installation process.

2.3.1 Missing dsn_tunneld File

Previously: After installing DSNlink Version 2.3E, this message appeared during system start up:

```
inet: dsn_tunneld no such file or directory.
```

This message was displayed every time inetd was started and was not dependent upon the UNIX version. This caused an erroneous entry for dsn_tunneld in /etc/inetd.conf.

Currently: The entry is no longer in /etc/inetd.conf.

2.4 ITS

The following sections describe fixes to the Interactive Text Search (ITS) application.

2.4.1 ECO Request Failed in the DECwindows Motif Interface

Previously: When using ITS in the DECwindows Motif user interface, after you clicked the Request File button to get an engineering change order (ECO), delivery failed with a segmentation fault (core dumped). The error did not occur in the command line interface.

Currently: This has been fixed so that ECO delivery succeeds in the DECwindows Motif interface.

2.4.2 Using an ITS Initialization File Resulted in an ACCVIO

Previously: A memory fault (core dumped) error resulted from starting DSNlink with the following ITS initialization file, dsn_its_init.ini:

```
open eco-summary
open aes
search shadow
ls
mail -ls -subj "DSN dir listing since 01-jun-2000"
quit
```

The ITS session failed during the ls command.

Currently: This has been fixed. The ACCVIO no longer occurs.

Note that the above initialization file, which was modeled on an example in the *DSNlink User's Guide*, needed additions for the set paginate off command (which keeps ITS from stopping after the first screen of titles) and the mail command required an address. This is the improved example for use in the command line interface:

```
open eco-summary
open aes
search -beg 1/1/1998 -end 6/6/2000 shadow
set paginate off
ls
mail -ls -add mike -subj "Shadow search 1/1/98 to 6/6/2000"
quit
```

2.4.3 Customers Could Make Only One ITS Connection with the Modem Transport

Previously: Customers could make only one ITS session with the Version 2.x modem transport. The second session got as far as 'Remote server responding' then eventually died with 'modem heartbeat stopped' and 'object referenced already in use' errors. The original connection kept working.

Currently: This problem has been fixed so that you can start multiple ITS sessions from a DSNlink node.

2.5 Multiple Applications Fixes

The following sections describe fixes that apply to more than one application.

2.5.1 Netscape Did Not Display the Online Help After Creating a Lock File

Description: When attempting to display the online help from the Help menu or Help buttons, Netscape did not display the help if your directory contained a lock file. This message appeared in the window where you started DSNlink:

```
netscape: not running on display node:0.0
```

Netscape creates a lock file when it terminates abnormally or the system crashes. The lock file is in the .netscape subdirectory in the user's home path. For example, this is an example of a command that displays the lock file:

```
% ls -alt ~/.netscape
total 414
.
.
lrwxr-xr-x   1 durant   DSNlink       19 Jun 23 17:53 lock ->
16.60.100.10:505413
.
.
```

This a Netscape error that is not caused by DSNlink. To remove the lock file, invoke Netscape in standalone mode, exit it, and then restart DSNlink. The lock file is removed.

To prevent one type of abnormal termination that creates a lock file, exit the Netscape window before you exit DSNlink.

Currently: DSNlink checks the PID of the lock file to determine if Netscape is still running, If Netscape is not running, the lock file is ignored and DSNlink starts Netscape to display the online help.

2.6 Network Exerciser Fixes

The following are fixed problems in the Network Exerciser application.

2.6.1 Defining DSNGATEWAY_TRACE Resulted in a Transport Error

Previously: If you defined the logical name DSNGATEWAY_TRACE to CT to trace connection errors and then ran the Network Exerciser, DSNlink displayed transport errors. For example:

```
% setenv DSNGATEWAY_TRACE ct
% 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
```

Currently: This has been fixed.

2.6.2 The Verbose Option Had No Effect

Previously: The -verbose option to the dsnnetex command, was ignored. No connection information was displayed if you enter dsnnetex -v, only the message statistics.

Currently: This has been fixed. The -v option causes connection routing information to be displayed.

2.7 Service Request Application Fixes

The following are fixes to the Service Request application.

2.7.1 Some Routing Codes Mistakenly Sent Acknowledgement Mail

Previously: If you sent a non-service request to the host, such as a suggestion, you received a service request acknowledgement instead of a thank you note for the suggestion.

Currently: The code has been modified so that the confirmation mail is not sent if no service request number is returned by the host. You receive the appropriate reply.

2.7.2 Saving a Fetched List No Longer Causes a Core Dump

Previously: If you used the DECwindows Motif interface to the Service Request application to fetch a list, for example, a list of routing codes, and then tried to save the list to a file, the system performed a core dump and the list was not saved. The list was saved successfully if you used the command line interface.

Currently: This has been fixed. The Save As operation no longer results in a core dump when you save a fetched list to a file.

2.7.3 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 to use a mail hub, you cannot receive communique mail, which includes flash mail, from the Customer Support Center.

Currently: DSNlink Version 3.0 no loner uses mail aliases for communique mail. The DSNlink Version 3.0 installation looks for these parameters, which define the people to receive copies of communique mail: Mail.Flash, Mail.Informative, Mail.Marketing, and Mail.Surveys. If the parameters do not exist in the configuration file, /usr/lib/dsn/config/.dsnrc, they are added with a value of root. If you previously edited mailing lists to add the names of other people to receive communique mail, you need to add those names to the parameters' definitions. Defining the parameters is a postinstallation task in the *DSNlink Version 3.0 for Tru64 UNIX Installation Guide*.

2.7.4 The Create Service Request Tutorial Did Not Appear

Previously: When you displayed the Create Service Request window and chose Tutotial from the Help menu, the following error message appeared:

```
Requested document (URL file://localhost/dsn$help/) could not be
accessed.

The information server either is not accessible or is refusing to
serve the document to you.
```

Currently: This has been fixed. The tutorial information for the Create Service Request window appears when you select Tutorial from the Help menu.

3
Known Problems and Restrictions

3.1 Restrictions

The following sections describe restrictions on the use of DSNlink.

3.1.1 Color Map Problems Result from Color-Intense Applications

Restriction: The DSNlink DECwindows Motif interface and Netscape may not be able to display all colors when you start them. For example, these are messages when DECwindows Motif is started and other color-intense applications are already running:

```
ISDS01 1»  dsn/win
    X Toolkit Warning: Urm__CW_ConvertValue: Could not convert color/pixel
    'Maroon'
    - MrmNOT_FOUND
    X Toolkit Warning: Urm__RealizeColorTable: Could not load color 'Dark
    Orchid' -
    MrmSUCCESS
```

The DSNlink windows appear with fewer colors than they should have.

This error may occur when Netscape is running when you start DSNlink. It is a color display problem that cannot be fixed in DSNlink code. problem. Netscape allocates 216 color map entries for its color table (see http://www.iconbazaar.com /color_tables/). Most older color graphics adapters have only 256 colors. When Netscape takes 216 colors, not many are left for other applications, such as DSNlink.

Workaround:

1. Exit DSNlink and Netscape.
2. Start Netscape with the -install option to make it use a private color map. For example:

   ```
   % netscape -install &
   ```

   The Netscape color map errors may appear anyway and any other existing pleasant colors on your screen are replaced with color combinations that were rejected by Netscape for obvious reasons. However, amid the color muck, Netscape looks fine.
3. Start DSNlink.

Or, you can set the number of colors Netscape is allowed to allocate with either of these methods:

- Use the following resource setting, which, in this example, sets the maximum colors to 80:

  Netscape*maxImageColors: 80

For more information about where to enter the resource setting, see /usr/doc /netscape/Netscape.ad.

- Use the -ncols option to specify the maximum number of colors. For example, this command specifies 128 colors:

```
% netscape -ncols 128
```

3.1.2 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.

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.

3.1.3 The Modem Must Be Started from root

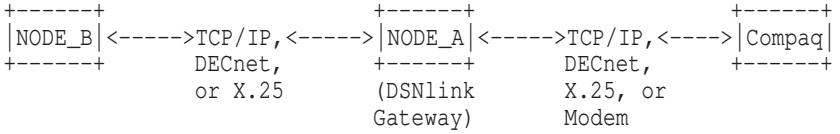
Restriction: You need to be root or superuser to start the modem daemon.

3.1.4 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.

3.1.5 The Modem Transport Is Supported on the Gateway Only

Restriction: The modem transport can be configured for use only between your DSNlink A node (the gateway) and the Compaq host. You cannot configure the DSNlink modem transport on B nodes that connect to a DSNlink gateway. The following diagram shows the transports that you can configure between systems:



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 The 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

The following sections describe know problems in the installation procedure, communications setup, or system configuration.

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

The following sections describe known problems in the ITS application.

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.

3.6 Maintenance or Multiple Application Problems

The following are problems that apply to DSNlink maintenance or to multiple applications.

3.6.1 Key Maintenance Window Is Obsolete

Description: The DSNlink Key Maintenance window, where you can create, modify, or delete authentication keys, is obsolete. The window was for maintaining DSNlink Version 2.2 for OpenVMS keys.

Workaround: As root, maintain the keys in the /usr/lib/dsn/keys directory using a text editor.

3.6.2 Using eXcursion to Run the DECwindows Motif Interface Causes Application Failures

Currently: Using eXcursion on a PC to run DSNlink applications, some fail. The Service Request application's windows close by themselves after DSNlink attempts to connect to the Compaq host. The Network Exerciser tests complete successfully.

The applications do not fail when used on the Tru64 UNIX system.

The problem seems to be caused when eXcursion cannot process DSNlink messages destined for stdout/stderr. eXcursion closes windows before messages appear.

Workaround: To give eXcursion a place to write messages before closing the application window, create the file dxdsn.sh with the following contents:

```
#!/bin/sh
dxdsn >dxdsnmain.log 2>&1
```

This directs all program output to the file dxdsnmain.log in the user's home path. Set the file's permissions as follows:

```
% chmod +x dxdsn.sh
```

3.6.3 The 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.

3.6.4 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

The following sections describe known problems with the modem transport.

3.7.1 The 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

The following are known problems in the Network Exerciser application.

3.8.1 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.

3.8.2 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.

3.8.3 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 Route Map

The following are known problems with using the DSNlink route map.

3.9.1 The DSNlink Setup Utility Does Not Update the Transport.Outside Parameter or Rebuild the Route Map Correctly

Description: When using the DSNlink Setup utility to reconfigure the system to use the modem transport instead of TCP/IP, the regenerated route map did not contain the modem transport entries. Also, the definition of the configuration file parameter Transport.Outside was TCP/IP when it should have been changed to Modem.

Workaround: Change Transport.Outside to this definition:

```
Transport.Outside:  TCP/IP Modem
```

Then rebuild the route map with the DSNlink Setup utility.

3.10 Service Request Application Problems

The following sections describe known problems in the Service Request application.

3.10.1 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.

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 Netscape or Lynx browsers.

The files you can print are:

- *DSNlink Version 3.0 for Tru64 UNIX Service Tool Description*
- *DSNlink Version 3.0 for Tru64 UNIX Installation Guide*
- *DSNlink Version 3.0 for Tru64 UNIX Release Notes*
- *DSNlink Version 3.0 User's Guide for the DECwindows Motif Interface*
- The Readme file

For the location of the files, see the Postinstallation chapter of the *DSNlink Version 3.0 for Tru64 UNIX Installation Guide*.

The following documents are in Hypertext Markup Language (HTML) format and are displayed by the Netscape browser, which is not included in the kit. The documents are accessible from the Help menu on the DSNlink main window:

- *DSNlink Version 3.0 for Tru64 UNIX Release Notes*
- *DSNlink Version 3.0 User's Guide for the DECwindows Motif Interface*
- *DSNlink Version 3.0 Glossary*
- *DSNlink Version 3.0 Error Messages*

The DSN HELP command invokes the Lynx browser, which displays the documentation for the command line interface.

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 Netscape browser.

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

A

Authentication, 1–2
  HMAC keys, 1–2
  key maintenance window is obsolete, 3–5

C

Clusters
  installations, 1–5
Colors
  restriction on applications, 3–1
Communique mail
  parameters, 1–4
  parameters in configuration file, 2–5
  recipients, 1–4
Configuration file
  communique mail parameters, 2–5
  defining recipients for all Compaq mail, 1–4
  defining recipients for communique mail, 1–4
Core dumps
  associated with fetching lists, 2–5
cpqcorp.net, 2–1

D

Dates
  year format requirement, 3–2
DES cipher, 1–1
Documentation
  Netscape display error, 2–3
Domains
  cpqcorp.net is recognized, 2–1
DSNlink
  documentation, 4–1
  interoperability with previous versions, 1–3
  overview, v
  restrictions, 3–1
  starting, 4–1
DSNlink Setup utility
  route map not correctly updated, 3–7
dsnmapq
  add feature now works, 2–1
dsn_tunneld missing, 2–2
dxdsn -display, 3–4

E

ECOs
  delivery failed in DECwindows Motif interface, 2–2
Editors
  invoke in read-only mode, 3–2
Encryption, 1–1
  restrictions on kit distribution, 1–1
  version, 1–1
eXcursion
  application failures, 3–5

F

File Copy application
  fixed problems, 2–2
  mail notification, 2–2
  no outgoing records in history log, 3–3
  service request number override removed, 1–5
  specialists cannot copy files from systems, 3–3

H

HMAC
  functions, 1–2
  keys, 1–2

I

ITS application
  beginning and ending dates, 3–4
  ECO requests failed in the DECwindows Motif interface, 2–2
  fixed problems, 2–2
  initialization file, 2–2
  modems made one ITS connection, 2–3
  reading articles result in internal exception, 3–4

K

Key Maintenance window
  obsolete, 3–5

L

Log files
  history log file with wrong permissions, 3–6
  some rejected applications not shown, 3–5

M

Mail
  parameters for specifying recipients, 1–4
  responding to communiques, 3–5
  specifying people to copy on communique mail, 1–4
  specifying people to copy on incoming, 1–4
  using mailsetup(8), 2–5
Modem transport
  appears to start when user is not root, 3–3
  hangup not detected, 3–4
  one ITS connection, 2–3
  REPKO modem scripts, 1–5
  reset phase, 3–6
  start from privileged account, 3–2
  supported on gateway only, 3–2
Mosaic browser, 1–3

N

Netscape
  color adjustment, 3–1
  lock file creation, 2–3
  replaces Mosaic, 1–3
Network Exerciser
  errors after defining DSNGATEWAY_TRACE, 2–4
  fixed problems, 2–4
  LZW_DYN compression, 3–6
  messages overwrite report, 3–7
  mirror options not implemented, 3–7
  verbose option, 2–4

O

Online documentation
  displayed by Netscape in DECwindows, 1–3

R

RC4 cipher, 1–1
RC5 cipher, 1–1
Remote Login application
  performance, 1–3
REPKO modem scripts, 1–5
Route map
  modem entries missing after an update, 3–7
  sorted file, 2–1
  X flag remains, 3–3

S

Service Request application
  acknowledgement mail incorrectly sent, 2–5
  fixed problems, 2–5
  hours can be added to beginning and ending dates, 1–3
  routing code descriptions, 3–7

T

TDES cipher, 1–1

X

X.25
  deinstallation does not remove entities, 3–3