Problem Solving Guide

Version 2, Release 1
Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page ix.

First Edition (July 1996)

This edition applies to Version 2.1 of the IBM CallPath DirectTalk/2 Voice Processing System and to all subsequent releases and modifications until otherwise indicated in new editions.

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Electrical current from power, telephone, and communication cables is hazardous. To avoid shock hazard, connect and disconnect cables as shown below when installing, moving or opening the covers of this product or attached devices. The power cord must be used with a properly-grounded outlet.

<table>
<thead>
<tr>
<th>To Connect</th>
<th>To Disconnect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn everything OFF.</td>
<td>Turn everything OFF.</td>
</tr>
<tr>
<td>First, attach all cables to devices.</td>
<td>First, remove power cord from outlet.</td>
</tr>
<tr>
<td>Attach signal cables to receptacles.</td>
<td>Remove signal cables from receptacles.</td>
</tr>
<tr>
<td>Attach power cord to outlet.</td>
<td>Remove all cables from devices.</td>
</tr>
<tr>
<td>Turn device ON.</td>
<td>Note: In the U.K., by law, the telephone line cable must be connected after the power cord.</td>
</tr>
</tbody>
</table>

Note: In the U.K., by law, the telephone line cable must be connected after the power cord.
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<thead>
<tr>
<th>Dialogic</th>
<th>D/121A</th>
<th>D/41D</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/41E</td>
<td>D/41-MC</td>
<td>D/81A</td>
</tr>
<tr>
<td>D/81-MC</td>
<td>DTI/211</td>
<td>LSI/40-MC</td>
</tr>
<tr>
<td>LSI/80-MC</td>
<td>LSI/120</td>
<td>TTS/41-MC</td>
</tr>
<tr>
<td>TTS/81-MC</td>
<td>VR/40</td>
<td>VR/41-MC</td>
</tr>
<tr>
<td>VR/81-MC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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About this book

This book provides information for solving problems encountered while using the IBM CallPath DirectTalk/2 voice-processing system (referred to elsewhere in this book as 'DirectTalk/2'). The book includes problem solving procedures, common problems and their solutions, detailed messages and return codes, and tracing information.

Who Should Use This Book

This book is intended to help anyone diagnosing and solving DirectTalk/2 system problems. This includes:

- System administrators
- System support personnel
- IBM customer engineers (CE)
- IBM systems engineers (SE)
- IBM Level 2 support personnel
- IBM Level 3 support personnel
- End users

How to Use This Book

Use this book to determine where a specific problem occurred and what to do to solve it. The following chapters are included in this book:

- Chapter 1 introduces you to solving problems and outlines the diagnostics available.
- Chapter 2 contains a table of common problems and suggested solutions.
- Chapter 3 contains a list of DirectTalk/2 messages, along with the message number, an explanation, and suggested responses. The messages are listed in ascending numerical order, with section headings. The message numbers are listed at the top of each page of the chapter for ease of reference.
- Chapter 4 contains a list of DirectTalk/2 return codes, along with explanations.
- Appendix A contains DirectTalk/2 trace information.
- A glossary of terms and abbreviations.
- An index.
Where to Find More Information

Other DirectTalk/2 Books and Information

This book is part of a library of DirectTalk/2 books. To get the most out of your system, refer to the other DirectTalk/2 books as well. The following books are included on the DirectTalk/2 CD-ROM and can be read on-line using the IBM Library Reader program which is also included on the DirectTalk/2 CD-ROM. If you prefer to have hard copy of any of the documents, you can print pages, sections, or whole books from IBM Library Reader. You can also buy the printed books by placing orders through your IBM representative, or the IBM branch office serving your locality.

The on-line versions of these books are also included on the Networking Systems Library CD-ROM.

- IBM CallPath DirectTalk/2: General Information and Planning Manual, GB35-4403
- IBM CallPath DirectTalk/2: Installation Guide, GB34-4406
- IBM CallPath DirectTalk/2: Administrator’s Guide, SB35-4405*
- IBM CallPath DirectTalk/2: Application Development User’s Guide, SB35-4408*
- IBM CallPath DirectTalk/2: Application Programmer’s Guide, SB35-4404*
- IBM CallPath DirectTalk/2: Problem Solving Guide GC33-1548*
- IBM CallPath DirectTalk/2: ADSI Application Developer’s Guide SC33-1762
- IBM CallPath DirectTalk/2: National Language Information, SC33-1865

The books marked with * in the list above are also provided in IPF on-line readable format. (Use the OS/2 VIEW command to display these manuals.)

All the programs and utilities provided with DirectTalk/2 also include on-line Help to assist you with the various DirectTalk/2 related tasks.

Non-DirectTalk/2 IBM Documentation Referenced in This Book

- IBM Distributed Console Access Facility documentation
- IBM Real-Time Interface Co-Processor documentation
- IBM Communications Manager/2 documentation
- IBM Personal Communications documentation

Non-IBM Hardware and Software Related Information

The following non-IBM documentation and contacts may also be of use:

- Dialogic Voice CPC Software Reference, 05-0080-002
- Dialogic Voice Software OS/2 Reference 4.1SC, 05-0010-006
- Dialogic Voice Hardware Guide, 05-0147-002
- Dialogic Network Hardware Guide, 05-0147-002
• **Dialogic Products and Services Guide** (Available in hardcopy or CD ROM titled World View 3)

• **Dialogic Software Installation Guide**

• **Dialogic System Release 4.2 Software Installation Reference**

• **Antares Software Installation and Programming Guide for OS/2.**

• **Dialogic Application Note 17 (AN017) Ordering Service and Installing Equipment for T-1 Applications**

• **XXX Voice SW Reference Guide for OS/2 and XXX Hardware Reference Guide**
  - specific to the hardware being used/purchased. (Where XXX is the particular board level product being used)

• **L&H TTS SW Reference for OS/2** (for Antares)

• **VCS ASR SW Reference for OS/2** (for Antares)

• **Aculab Device Driver Installation Reference Manual**

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14140 Midway, Suite 100
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Tel. 214-386-0300
Chapter 1. Solving Problems

This chapter contains an introduction to solving problems with DirectTalk/2, outlining the various log files, configuration settings, and traces which are available to help you.

If you cannot find a solution to your problem from the help in this document, then you should also consult the manuals for the other associated hardware and software installed as part of your DirectTalk/2 system.

If you have any user-defined actions, then you will need to exercise your own diagnostics to see if the problem is caused by something in that code.

If, after trying all the diagnoses suggested in this and the other documents, you have still not found a solution to your problem, then you should report the problem to your service representative.

If your problem cannot be resolved at the level of support your contract specifies, it will be escalated to the appropriate support level for resolution based upon its severity.

Common Problems

Some commonly occurring problems which you may encounter are listed in Chapter 2, “Common Problems and Solutions” on page 2-1 together with suggested solutions. Take a look there first to see if you can fix things quickly.

Here is an example of one of the entries:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Telephony Problems</strong></td>
<td></td>
</tr>
<tr>
<td>Hang Up Tone (HUP_Tone) problem</td>
<td>• Turn off the Automatic Gain Control.</td>
</tr>
<tr>
<td></td>
<td>• Set Max Silence before HUP to 0.</td>
</tr>
<tr>
<td></td>
<td>• Set Non-Silence before HUP to 0.</td>
</tr>
<tr>
<td></td>
<td>• Set Minimum Loop Current to 10.</td>
</tr>
<tr>
<td></td>
<td>• Check the HUP_Tone configuration in the VSTS.CFG file.</td>
</tr>
<tr>
<td></td>
<td>• Set HUP_Tone in the VSTS.CFG file with a repetition value of 5.</td>
</tr>
</tbody>
</table>

Help

Many of the DirectTalk/2 screens and panels have a Help button on them. Always try clicking on this to get the up to date specific help for the immediate task or error. Once the help panel has appeared, and if you don’t get enough information from it, try clicking on the General Help option on the Help pulldown at the top. If it looks promising but you’d still like to know more, then you can see the full contents of the help file you’re in by selecting the Contents option on the Options pulldown.
Messages

DirectTalk/2 produces many messages while it is running. Some of these are error messages, but most simply report that certain events have taken place. While you're in some of the DirectTalk/2 windowed programs, such as the Voice Application Developer, for example, any errors that occur will pop up on your screen in a panel of their own, so you get to see them immediately. The messages will help you to see what was happening around the time your problem occurred. They are all numbered, and are listed in Chapter 3, “DirectTalk/2 Messages” on page 3-1 where you can find a full explanation of what each one means, together with a recommended response.

Here is an example of a message with a time stamp on the front:
03-10-95 15:20:29 EXH2712 Transfer control to VSEXEC start routine

Log Files

All such messages, including errors, are routinely stored in Log files which you can browse after the event, or print, or copy to some safe place for future reference.

The various DirectTalk/2 log files are stored in the main installation directory. There are two types of log and each has a maximum size, which you can set in the DirectTalk/2 Setup. When a session log reaches its maximum size, the log is emptied (and a single entry put in to say so) and then it begins to fill again; the other logs are prefilled with blanks and then filled in a circular fashion such that the latest entry overwrites the previous oldest one.

Also in DirectTalk/2 Setup you can change the names of the log files. The names used in this document are the defaults.

The most recent part (100 lines) of a session log may be viewed dynamically in the Node Manager, or any simple text editor may be used to view a snapshot of the whole file.

The other logs may be viewed dynamically in the Node Manager, except for the Application Statistics log from which a report must be created (see IBM CallPath DirectTalk/2: Administrator’s Guide).

Session Logs

These log files are always produced; you can set their maximum size in the DirectTalk/2 Setup in the Sessions section.

Application Session Log

<appname.log> Bearing the same name as the application session id, and with an extension of .log. This log has messages recording all the events associated with the session running your applications.

Here is an example of a small part of an application session log:
08/15 16:57:01.56 EXH3108 ********** SESSION START **********
08/15 16:57:12.06 EXH0613 The requested line is unavailable.
08/15 16:57:12.06 EXH3004 A Telephony Server error caused the voice program to end.
08/15 16:57:16.19 EXH2184 The session has stopped.
Terminal Emulation Session Log

Bearing the same name as the emulation session (ECM32001 for example), and with an extension of .log. This log has messages recording all the events associated with the session running your host emulations.

Other Optional Logs

These log files are only produced if they are enabled in the DirectTalk/2 Setup in the Logs section.

The filenames of the log files are set by default to have the node name as the first part, and the extension part indicates which log it is.

In the setup you may set their filenames to be something different, if you wish, and also you may set their maximum size. If you cannot find a log file, check your setup to see if it is enabled, and what its name is.

Node Message Log

Contains the GSI messages, recording the events associated with the general server. When the Voice System is running, these messages also appear in the Voice System window.

Here is an example of a small part of a node message log:

30-01-96 11:56:37 EXH2718 Transfer control to DBSERVER 32 bit init routine
30-01-96 11:56:37 EXH2715 Return from init routine rc=0
30-01-96 11:56:40 EXH2714 Transfer control to VSTELESV 32 bit init routine
30-01-96 11:56:40 Telephony Server initialisation using VSTS.CFG starting.

Command Server Messages Log

Contains the messages recording the events associated with the command server, which handles interactions between DirectTalk/2 and the operating system command line.

Here is an example of a small part of a common server log:

30-01-96 11:56:44 EXH2061 Path: answering local is ready.
30-01-96 11:56:46 EXH2015 A call was received from: GSSSN01

Application Statistics Log

Contains statistics generated by the various statistics Actions which an application may use. If an application uses any statistic Action then a set of standard statistics is entered into this log as well as the data specified in the call. If no statistics Actions are used by the application this log will remain empty. This log may not be viewed, but instead a report may be created from it, (see IBM CallPath DirectTalk/2: Administrator's Guide).

Node Statistics Log

The Node Statistics are generated each time the voice system is stopped, and provide general information about system performance. The log is arranged into headed sections for General Server and Telephony Server and shows details of the number of calls made and so on.

Here is an example of a small part of a node statistics log:
Node Management Events Log

<nodename.aud> Contains all system management actions you have taken on the voice system.

Trace files

The various parts of the DirectTalk/2 system software are able to output a trace of what they are doing into a file, much like the logs we've already described.

Traces, however, contain information intended to be of use to the technical support team, and are not in a form which is easily understandable by the general user. Also it takes the computer time to output these traces, and this in itself can cause problems with performance, for example.

Normally you would only turn on a trace if you were asked to by your service representative in the course of solving a difficult problem. Traces are generally turned on and off by setting particular environment variables, either at the command prompt or by editing one of the .CMD files provided with the system, or by adding extra statements in a configuration file.

There is a full description of tracing in “DirectTalk/2 Trace” on page 21 in this document. The DirectTalk/2 trace files are stored in the main installation directory. The files do not have a predetermined maximum size, so you must ensure that you have enough disk space.

Here is an example of a piece of the trace file that might result from a telephony server API trace created by setting TSAPI_TRACE=YES:

```
TS API trace started - 1995-03-27 16:33
16:33:51 VAopenE client=GSSSN1demoapp1, gsi=GSSSN1, line=0, buf=001F:424E
16:33:51 VAopenE adapt=255, to=0, cnt=2 type=192 io=001F:41F2, iolen=16384
16:33:51 VAopenE exit result=/zerodot srverr=/zerodot (neterr=/zerodot)
    [api er=/zerodot rc=/zerodot sec=/zerodot/zerodot /zerodot/zerodot /zerodot/zerodot /zerodot/zerodot
     *ts funresp=/zerodot, funaux=1532713819]
16:33:51 session=1, NIF line=1, buf data len=4
VAopenE line data addr 001F:424E-
0000 32343434 +2444 * *.... *
16:34:13 VAwaitC session=1, rings=1 (stop flag=1)
16:34:18 VAwaitC exit result=0 srverr=0 (neterr=0)
    [api er=0 rc=0 sec=08 00 00 00 00] [ts funresp=0, funaux=0]
16:34:18 num=
16:34:18 VAinitFL session=1
```
Alerts

Alert Messages

For certain errors DirectTalk/2 not only generates a message but also a NetView alert, which is sent to the host through the optional Communications Feature. You can specify whether the alerts are actually sent or not in the Alerts section of DirectTalk/2 Setup.

A user application may generate its own alerts, using the Send_Alert action or the vmsSendAlert API. These will be accompanied by message 4590. For further information see IBM CallPath DirectTalk/2: Application Development User’s Guide, SB35-4408.

The following is a list of the messages which have accompanying alerts. For the full explanation of each message see Chapter 3, “DirectTalk/2 Messages” on page 3-1.

EXH2006 There is not enough memory available for: <text>
EXH2022 This path has stopped: <number> The Return Code is: <number>
EXH2029 Path: <number> was canceled by: <number>
EXH2030 Path: <number> was started by: <name>
EXH2031 The program was stopped by Ctrl+Break.
EXH2048 Preceding message(s) - failure starting configuration: <filename>
EXH2056 DLL Load failed with Return Code: <number> The local server program is: <name>
EXH2063 Initialization failed with Return Code: <number> Local server: <name>
EXH2065 Path: <number> to host: <name> is ready.
EXH2066 Path: <number> calling: <name> is ready.
EXH2067 Path: <number> calling local server: <name> is ready.
EXH2068 Path 0 to node: <name> is ready.
EXH2105 Request to stop node made by: <name>
EXH2118 Could not communicate with host: <name> APPC Return Code is: <number>
EXH2119 Could not access host: <name> APPC Return Code is: <number>
EXH2120 Could not open message file: <filename> The Return Code is: <number>
EXH2121 Server: <name> was stopped by: <number>
EXH2172 The system could not initialize server: <name>
EXH2180 This module: <name>.DLL is defective or not installed, or
EXH2226 This session stopped due to error: <name>.<time>
EXH2238 The node will suspend at: <time>
EXH2241 The system is re-booting.
EXH2242 The system could not open device driver: <name>
EXH2299 There is not enough disk space to write log data to: <filename>
EXH3604 Telephony Server initialization failed - error code <number>.
EXH3997 <text>
EXH3998 Component <name>, instance <number> detected the error. Error text-<text>
EXH3999 Telephony Server Internal Error, report the following 2 messages:
EXH4590 <text>
Alert structure

All alerts from DirectTalk/2 have a four-level hierarchical name structure. From the highest level these are:-

**DirectTalk/2 machine name**
Specified by the user as the DirectTalk/2 network node name.

**GSI name**
Specifies the name of the DirectTalk/2 node originating the alert. This name is defined during the Communications Feature configuration in DirectTalk/2 Setup as the Alert Machine name. For more information, refer to *IBM CallPath DirectTalk/2: Installation Guide*.

**Server name**
Specifies the name of the server originating the alert. The following list identifies the servers and their respective names:-

<table>
<thead>
<tr>
<th>Server</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>5250 EHLLAPI Emulation Monitor</td>
<td>VS5250EH</td>
</tr>
<tr>
<td>3270 EHLLAPI Emulation Monitor</td>
<td>VS3270EH</td>
</tr>
<tr>
<td>3270 PCMUX Emulation Monitor</td>
<td>VS3270MX</td>
</tr>
<tr>
<td>3270 LUA Emulation Monitor</td>
<td>VS3270LU</td>
</tr>
<tr>
<td>ASCII Emulation Monitor</td>
<td>VSASCII</td>
</tr>
<tr>
<td>Database Server</td>
<td>DBSERVER</td>
</tr>
<tr>
<td>Directory Server</td>
<td>DIRECTRY</td>
</tr>
<tr>
<td>Mailbox Server</td>
<td>MAILBOX</td>
</tr>
<tr>
<td>OS/2 Command Server</td>
<td>OS2CMDS</td>
</tr>
<tr>
<td>Session Monitor</td>
<td>VSEXEC</td>
</tr>
<tr>
<td>Statistics Server</td>
<td>VSSTAT</td>
</tr>
<tr>
<td>Telephony Server</td>
<td>VSTELESV</td>
</tr>
</tbody>
</table>

**Component name**
The name of the component can either be the same name as the server or may be blank. In the case of the Session Monitor, the component name is the name of the session. In the case of 3270 or 5250, the component name is the name of the emulator.

Testing Phone Lines

Starting the tests
You can run tests on each phone line. Before you start a test the line to be tested must be inactive, that is, its status is INACTIVE. If the line to be tested has an application assigned to it you will have to stop the application session, which you can do from within the Node Manager.

To run the tests, issue the TSTLINES command with parameters as follows:
```bash
tstlines line-number node
```
where line-number is the number of the line to test, and node is the node that is associated with the line.

The program will then present a menu from which you can select individual tests to be run, or the whole suite.

As the tests run the prompts and results are displayed on the screen, and that same information is logged to the file TSTLINES.LOG in the current directory.

The Tests

When running tests 1 to 5 you will be prompted to dial the number assigned to the line under test, and DirectTalk/2 will answer the phone number you specified.

1 Text-To-Speech test
   If the system has the capability, DirectTalk/2 will play the text segment "This is the DirectTalk/2 text to speech test".

2 Voice Recognition tests
   The system attempts to test both discrete and continuous voice recognition. In both cases you are prompted to speak six words from the sub-vocabulary of the vocabulary in use. DirectTalk/2 then displays the numbers you spoke.

3 DTMF Recognition test
   The system will prompt you to press six keys on the telephone. It will then display the numbers you pressed.

4 Play DTMF test
   The system plays a set of DTMF tones.

5 Voice Recording test
   A prompt will appear on the screen instructing you to speak into the phone when you hear a tone. You can speak for up to 30 seconds. When you have finished speaking into the phone, press # on the telephone key pad. The system will then play back your voice recording.

6 Outbound Call test
   DirectTalk/2 will dial any phone number and test that the call succeeds. The procedure is:
   1. DirectTalk/2 hangs up the phone.
   2. You then hang up your phone.
   3. Specify the phone number for DirectTalk/2 to call by typing it.
   4. Press Enter so that DirectTalk/2 dials the phone number.
   5. When the phone rings, pick up the receiver to answer it.
   6. DirectTalk/2 prompts you with the results.
   7. Replace the receiver.

99 All available tests
   All the above tests are run in sequence.
Dialogic ANSR Test

Dialogic provides a test program, ANSR, to test the standard telephony functions. When you run ANSR, there must be no other DirectTalk/2 programs running on the same system.

The program is in the directory `<dialogic>\DEMO\DXXXDEMO\ANSR`. `<dialogic>` is the directory where the Dialogic code was installed. You can start the program from the command line, using the following syntax and parameters:

```
```

where

- **Bn**: Starting D/4x board number, default: 0
- **Fn**: Frontend type, A-Analog, E-E1, T-T1, default: Analog
- **Nn**: Number of D/4x channels to use, max: 8
- **P**: Run in PEB mode, default: SCbus
- **R**: Perform Analog routing - default: no routing performed
- **Tn**: Starting DTI board number, default: 0

GETPD.EXE

The GETPD.EXE program collects system information which is then sent to and interpreted by the DirectTalk/2 service personnel. It is a single, self-contained, executable file, but requires several other programs shipped with the DirectTalk/2 system to run correctly.

When run, the GETPD.EXE program creates a temporary subdirectory called GETPD under the voice system installation directory. It then copies the files required to this directory and packages them up into the file GETPD.FLS. GETPD.FLS is then copied to the voice system installation directory and the GETPD subdirectory and its contents are erased. Give the GETPD.FLS file to your support personnel to be checked.

GETPD should be run only when a PMR is raised or at the request of your DirectTalk/2 support personnel. The file GETPD.FLS should be given to the support personnel along with a concise description of the problem.

To run the program, enter the following from the directory where your voice system is installed:

```
getpd
```

GETPS.EXE will only work effectively if the voice system is not running.

The program may be invoked with the command line option KEEP so that the temporary directory and its contents are not erased once the program has run. This is to aid on-site support of the product.
## Chapter 2. Common Problems and Solutions

This chapter lists some commonly encountered problems, and for each one suggests responses which have been found to cure the problem.

The list is in the form of a table, loosely grouped as follows:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>2-1</td>
</tr>
<tr>
<td>DirectTalk/2 Startup</td>
<td>2-2</td>
</tr>
<tr>
<td>Node Manager</td>
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</tr>
<tr>
<td>Host Sessions</td>
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</tr>
<tr>
<td>Dialogic</td>
<td>2-4</td>
</tr>
<tr>
<td>Telephony</td>
<td>2-4</td>
</tr>
<tr>
<td>Voice Recognition</td>
<td>2-6</td>
</tr>
<tr>
<td>Voice Segments</td>
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<tr>
<td>Voice Modules</td>
<td>2-7</td>
</tr>
<tr>
<td>General</td>
<td>2-7</td>
</tr>
</tbody>
</table>

If you encounter a problem that presents a symptom not listed here, see Chapter 1, “Solving Problems” for help in solving it.

### Table 2-1 (Page 1 of 7). DirectTalk/2 Common Problems and Solutions

<table>
<thead>
<tr>
<th>Problem symptom</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error message with error number displayed on console screen.</td>
<td>Note the error number and proceed to Chapter 3, “DirectTalk/2 Messages” on page 3-1.</td>
</tr>
<tr>
<td>The following Dialogic error message from the firmware download is displayed:</td>
<td></td>
</tr>
<tr>
<td>WSB0017:Board ... Download failed Error line 1: value too large -3743</td>
<td></td>
</tr>
<tr>
<td>• Dialogic download problems.</td>
<td></td>
</tr>
<tr>
<td>• Traps in Dialogic device drivers such as D4XDRV$ (DXGENDRV.SYS).</td>
<td></td>
</tr>
<tr>
<td>• Dialogic Adapter Cards not working properly.</td>
<td></td>
</tr>
<tr>
<td>Care must be taken when setting the Dialogic jumpers, IRQs and addresses to avoid conflict with other adapters and drivers in the system, in particular the following:</td>
<td></td>
</tr>
<tr>
<td>• The Dialogic card's memory address defaults to A1000 but this can conflict with some video adapters. Check the range used by your video adapter and find an unused range to set - often the D0000 range is appropriate.</td>
<td></td>
</tr>
<tr>
<td>• Token Ring Adapters - check what settings are in use by running LAPS, and also check the BIOS settings by running the machine’s configuration utility (this is often accessed by pressing Alt-F1 or similar at a certain point in the power-on sequence - see the manuals for your particular computer).</td>
<td></td>
</tr>
<tr>
<td>Problem symptom</td>
<td>Solution</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------</td>
</tr>
</tbody>
</table>
| MultiPort Model 2 (formerly PortMaster) Adapter card conflicts. | In the following, where it says to check the BIOS settings, these can be accessed by running the machine's configuration utility (this is often accessed by pressing Alt-F1 or similar at a certain point in the power-on sequence - see the manuals for your particular computer).  
  - The IRQ setting defaults to 15 - this can conflict with some Video drivers. A more suitable setting might be 7, but check first to see what IRQs are in use in your BIOS.  
  - The default base address of 02A0 may conflict with a primary Token Ring Adapter; if this is so, change it to 06A0.  
  **Note:** If you change it, you must also change the DirectTalk/2 Setup to refer to this adapter card as Card 1 (the default was 0).  
  - Check that any settings you put into ICAPARM.PRM are correct - note that the values there are Hex values.  
  - The Max Task Definition defaults to 10Hex. If more comms sessions are required this may need to be raised. Add 1 per session up to a max of C0Hex (192).  
  - Make sure that the card ROM address is not shadowed in RAM, by disabling shadowing in the BIOS configuration, otherwise booting using the device drivers can cause expanded memory errors. |

**DirectTalk/2 Startup**

| The following message is displayed: |  |
| "...could not open VR card: 0" |  
  - Check the switches on the Dialogic cards, especially the Daughter Boards.  
  - Check that the I/O ports and RAM/ROM memory addresses for the card match what is set up in the Dialogic software configuration. These settings must not conflict with the settings for other cards. (This can be the case if certain Token Ring adapters are also configured.) |
<table>
<thead>
<tr>
<th>Problem symptom</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The following message is displayed on a General Server screen:</td>
<td>• Check the adapter card slots. Try other slots if necessary.</td>
</tr>
<tr>
<td>“EXH1115 System could not start Voice Recognition card: number of card”</td>
<td>• Check that the config.sys file entries for the card are correct (see <em>IBM CallPath DirectTalk/2: Installation Guide</em>).</td>
</tr>
<tr>
<td></td>
<td>• Check that the interrupt levels, the DMA, and the memory addresses have been set correctly (see <em>IBM CallPath DirectTalk/2: Installation Guide</em>).</td>
</tr>
<tr>
<td></td>
<td>• Check the physical connections (cables, connectors).</td>
</tr>
<tr>
<td></td>
<td>• Make sure that the PBX is correctly configured for DTMF.</td>
</tr>
<tr>
<td>Error 110</td>
<td>• Check that the old Dialogic environment is properly cleared before upgrading the system.</td>
</tr>
<tr>
<td></td>
<td>• Check through the upgrade procedures, and make sure that the upgrade from DirectTalk/2 is done correctly</td>
</tr>
<tr>
<td></td>
<td>• Re-install the Dialogic and then the DirectTalk/2 software.</td>
</tr>
<tr>
<td>DirectTalk/2 hangs when starting after “TS initializing xx sessions” is displayed on a General Server screen.</td>
<td>Check that the IRQ on the DirectTalk/2 board is the same as in the DIALOGIC.CFG file for ISA systems.</td>
</tr>
<tr>
<td>Node Manager</td>
<td></td>
</tr>
<tr>
<td>Node Manager windows being worked with close or disappear.</td>
<td>The local node or the remote node being worked with has become unavailable. If this is not the case, then an unexpected error has occurred - check the log files.</td>
</tr>
<tr>
<td>Node Manager windows being worked with close and the Password Required window is displayed from the main window.</td>
<td>A password for the node being worked with has been added or changed. The correct new password should be entered. The closed windows will not reopen.</td>
</tr>
<tr>
<td>Host Sessions</td>
<td></td>
</tr>
<tr>
<td>Host session is not accessible.</td>
<td>Make sure that your emulator (Communications Manager/2 or PC3270) has been started.</td>
</tr>
<tr>
<td>Failure to connect</td>
<td>• Communications Manager/2 or PC3270 was not started when DirectTalk/2 session started.</td>
</tr>
<tr>
<td></td>
<td>• Parameter 1 not specified on the Connect Screen API function.</td>
</tr>
<tr>
<td></td>
<td>• If you defined specific emulator names, make sure they are contained in double quotes.</td>
</tr>
<tr>
<td>Problem symptom</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dialogic cards are giving problems.</td>
<td>Use the D40CHK/D41CHK Diagnostics that are delivered with the Dialogic cards to check for hardware problems. Use the ANSR demonstration program to test basic function.</td>
</tr>
<tr>
<td>Unexplained errors where a hardware problem is suspected.</td>
<td></td>
</tr>
<tr>
<td><strong>Telephony</strong></td>
<td></td>
</tr>
<tr>
<td>Telephony Server Unexpected RC 252 in the problem log.</td>
<td>Increase the Voice Cache in the Telephony Server Configuration.</td>
</tr>
<tr>
<td>Undefined crash of an application with RC=0.</td>
<td></td>
</tr>
<tr>
<td>Lines hang indefinitely on Wait_for_Call.</td>
<td></td>
</tr>
<tr>
<td>Telephony Server error return code -1, reason:49</td>
<td>Inconsistency detected by the Telephony Server API.</td>
</tr>
<tr>
<td>• Check the message in the log file &lt;node name&gt;.log.</td>
<td></td>
</tr>
<tr>
<td>• Check the DirectTalk/2 Telephony Server configuration.</td>
<td></td>
</tr>
<tr>
<td>• Make sure that Voice configuration is correct.</td>
<td></td>
</tr>
<tr>
<td>Hang Up Tone (HUP_Tone) problem</td>
<td>• Turn off the Automatic Gain Control.</td>
</tr>
<tr>
<td></td>
<td>• Set Max Silence before HUP to 0.</td>
</tr>
<tr>
<td></td>
<td>• Set Non-Silence before HUP to 0.</td>
</tr>
<tr>
<td></td>
<td>• Set Minimum Loop Current to 10.</td>
</tr>
<tr>
<td></td>
<td>• Check the HUP_Tone configuration in the VSTS.CFG file.</td>
</tr>
<tr>
<td></td>
<td>• Set HUP_Tone in the VSTS.CFG file with a repetition value of 5.</td>
</tr>
<tr>
<td>Not enough lines when developing on a system with only one line. Bear in mind that the Mailbox Manager needs one line for itself if it is being used.</td>
<td>Using an ISA SCSI adapter card (for a hard disk, say) on a PCI bus motherboard can cause performance problems. Take care to arrange your bus connections as recommended in the guide for your system.</td>
</tr>
<tr>
<td>• Speech breaking up.</td>
<td></td>
</tr>
<tr>
<td>• Poor performance generally.</td>
<td></td>
</tr>
<tr>
<td>Problem symptom</td>
<td>Solution</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------</td>
</tr>
</tbody>
</table>
| 912 timeout error occurs when one part of the telephony server is waiting for another part of the telephony server to respond. | • CPU utilization - Make sure that VP (Voice Processing telephony sub-system) gets a fair slice of CPU time. Follow the next steps to see if another process in the system is using the CPU excessively.  
1. Start the PULSE program that comes with OS/2, and see if it goes to 100% when the error occurs.  
2. Look at the system to see what else is running on it, and may be using all the CPU time.  
3. If you need a breakdown of process by CPU usage, use the IBM System Performance Monitor/2 (SPM/2) product.  
• Memory check - Make sure that you have the system configured with at least the recommended memory requirements using DirectTalk/2 Setup. Also, since you may need more memory depending on what else you have running on the system:  
1. Check the size of the swapper file after it has been running for about a day (when it has stabilized after startup), and when the 912 errors start occurring.  
2. See if there has been any significant growth in the size of the swapper file. If so, you need to track down where this swapper growth has come from.  
• Disk I/O - Make sure that VP can get to the disk quickly enough. To improve the situation:  
  – Pre-load applications.  
  – Increase the size of the VP cache in VP configuration.  
  – Keep the voice segments to under 20 seconds. (For example, if you are playing a menu, split a long segment into a number of smaller ones.)  
  • Set PRIORITY=ABSOLUTE in the CONFIG.SYS which prevents the foreground session using excessive resources. |
<p>| Warning responses are slow - the system may be overloaded. | |
| Place_a_call Action not working properly. | Run the Dialogic CPC program which will output parameters which you can put into your Telephony Server configuration in DirectTalk/2 Setup. See Dialogic Voice CPC Software Reference, 05-0080-002 for full details. |</p>
<table>
<thead>
<tr>
<th>Problem symptom</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voice Recognition</strong></td>
<td></td>
</tr>
<tr>
<td>The following message is displayed:</td>
<td>• Check the switches on the Dialogic cards, especially the Daughter Boards.</td>
</tr>
<tr>
<td>“...could not open VR card: 0”</td>
<td>• Check the I/O and RAM/ROM memory addresses for non-uniqueness (This can be the case if certain Token Ring adapters are also configured.)</td>
</tr>
<tr>
<td>Calls are routed to Voice Recognition line 4 instead of line 1.</td>
<td>System shutdown and cold boot to clear the Voice Recognition cards.</td>
</tr>
<tr>
<td>System is adding a digit to create the maximum number of digits.</td>
<td>Ensure that the difference between the minimum and maximum digits to receive is not greater than three.</td>
</tr>
<tr>
<td><strong>Voice Segments</strong></td>
<td></td>
</tr>
<tr>
<td>Voice lines don’t go active after starting the Voice System.</td>
<td>• Check the Dialogic entries in the CONFIG.SYS file.</td>
</tr>
<tr>
<td></td>
<td>• Check the interrupt levels, DMA, and memory addresses on ISA systems in particular for Dialogic.</td>
</tr>
<tr>
<td></td>
<td>• Check the physical connections (correct cables and connectors, MF capability configured on the PBX).</td>
</tr>
<tr>
<td></td>
<td>• Re-install Dialogic diskettes and check the voice parameters.</td>
</tr>
<tr>
<td></td>
<td>• Run the Dialogic test program ANSR which will be found in the directory &lt;dialogic&gt;\DEMO\DXXXDEMO\ANSR where &lt;dialogic&gt; is the directory where the Dialogic code was installed.</td>
</tr>
<tr>
<td>Hang Up Tone (HUP) while recording voice segments using a female voice.</td>
<td>• Set Automatic Gain Control to ON.</td>
</tr>
<tr>
<td></td>
<td>• Set Minimum Loop Current (BD_MINLCOFF) from 1 to 5000.</td>
</tr>
<tr>
<td></td>
<td>• Check the value used for Max Non-silence in the Telephony Server Configuration part of DirectTalk/2 Setup.</td>
</tr>
<tr>
<td></td>
<td>• Turn off hands-free capability on the telephone.</td>
</tr>
<tr>
<td></td>
<td>• Use a high quality microphone, Dialogic Promptmaster, etc. for recording of the segments.</td>
</tr>
<tr>
<td></td>
<td>• Reset all parameters when finished.</td>
</tr>
<tr>
<td>Problem symptom</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Voice pattern cannot be edited.                      | • Check for defects with the Dialogic D card.  
• Check for corrupt .SGx file, where x is a language letter. One way to check the file is to back it up using the Compress utility in the VAD (or comprdb at a command prompt) - if then compression succeeds with no errors then the file is not corrupt; if the compression fails, delete the failed new version and rename the .bak, and then try using the Recover utility (or recovdb) which may restore it. |
| Voice Modules                                        |                                                                                                                                 |
| Unwanted Cut-Thru during a prompt.                  | • Make sure that the latest TSVRDIAL.DLL is on the system and that only one exists.  
• Make sure that Automatic Gain is turned off during recording of the segments.  
• Check the Cutthru Threshold values. See IBM CallPath DirectTalk/2: Application Development User’s Guide for suggestions. |
| General                                              |                                                                                                                                 |
| Error message with error number displayed on console screen. | Note the error number and proceed to Chapter 3, “DirectTalk/2 Messages” on page 3-1.                                                      |
| System answers the phone immediately at Wait_for_Call. | Set the Variable Hookstat in the configuration of the LSI channels to 0.                                                               |
| "Database is damaged" in the Node Message log (GSI log). | • Backup the file in question  
• Use the Recover utility in the VAD (or recovdb at a command prompt) which may restore the file.  
• Write a program that goes through and closes and compresses all the databases on a regular basis (once per day, once a week, etc.). |
| Swapper.dat grows steadily until out-of-memory errors occur. | Check your user actions, user requesters, and user servers for memory leakage - typically a malloc() or equivalent has no free() associated with it. |
Chapter 3. DirectTalk/2 Messages

This chapter contains a complete list of the messages which DirectTalk/2 produces during its operation. ("Messages" on page 1-2 describes where these messages appear). In this list each message is accompanied by an explanation of what it means, and the response that you are recommended to make.

For ease of reference, the messages are listed in message number order, but they also fall into various groups, and the heading at the start of each group will tell you which particular part of DirectTalk/2 produced those messages.

Any message numbers not listed are not in use at the time of publication. However, if a message displayed on your console is not listed in this book, you may find it in Read This First.

Many of the messages produced by DirectTalk/2 contain numbers, filenames, names and so on which vary each time the message is logged. In this document these items are represented by the following symbols:

- `<number>` A number
- `<name>` A name
- `<filename>` A filename
- `<text>` A string of characters, numbers or words
- `<time>` A time of day
- `<date>` A date
Voice Application Developer Messages (0001-0199)

EXH0002  This is the last page.
Explanation:  Information message. There are no further screens of data to be viewed.
User Response:  No response is required.

EXH0003  This is the first page.
Explanation:  Information message. There are no previous screens of data to be viewed.
User Response:  No response is required.

EXH0004  The system could not open a temporary work file.
Explanation:  The system attempted to open a file temporarily and it failed to open.
User Response:  Ensure that there is sufficient disk space where the Voice System is installed.

EXH0005  All phone lines are in use.
Explanation:  All telephone lines are currently in use and hence there is no spare line that can be used.
User Response:  You cannot complete this action until one of the telephone lines has been made available.

EXH0006  Your color monitor must be in 80 character mode for the program to operate. Use the MODE C080 command.
Explanation:  The program must be in 80 character mode for it to start successfully.
User Response:  Set the session to 80 character mode using the command MODE C080 and restart the program.

EXH0007  You must specify at least one return code.
Explanation:  The Step Details panel for the Link_to_Appl action has no return code specified.
User Response:  A minimum of one return code must be specified in the Step Details panel for the Link_to_Appl action.

EXH0009  The delete was canceled.
Explanation:  Information message. The delete operation was canceled by the user.
User Response:  No response is required.

EXH0010  The segment or module name was deleted.
Explanation:  Information message. The voice segment, text segment, or Voice logic module specified was successfully deleted.
User Response:  No response is required.

EXH0011  Specify all items and Press Enter. Use F12 to cancel
Explanation:  The key you pressed does not have a function in this panel.
User Response:  Fill in all the fields and press Enter to go ahead, or press F12 to cancel and exit from this panel.

EXH0012  The action was canceled. Could not load this panel: <name>
Explanation:  The panel named could not be loaded and the function was therefore abandoned.
User Response:  Please check your installation to ensure that all files are installed correctly.

EXH0013  The application already has: <number> steps. You may not insert any more.
Explanation:  You are attempting to exceed the maximum number of steps that can be defined in a voice program.
User Response:  Split your voice program into separate components and use the Link_to_Appl and Return_from_Appl actions to link these components together.

EXH0014  You must specify a file name.
Explanation:  When the Voice System attempted to process your input, one or more of the fields was left blank.
User Response:  Fill in all the fields in the panel and press Enter to process the input.

EXH0015  You must specify a record key offset.
Explanation:  The record key offset field has been left blank.
User Response:  Insert a value for record key offset and press Enter to process the input.

EXH0018  You must specify a record key length.
Explanation:  The record key length field has been left blank.
User Response:  Enter the required record key length in the panel.
EXH0019  Key not active.
Explanation:  The key you pressed has no effect.
User Response:  The list of valid keys is displayed at the bottom of the panel.

EXH0020  You must specify a server name before pressing Enter.
Explanation:  The Database Node, or server name, has been left blank.
User Response:  Insert the name of a valid GSI Node Name.

EXH0021  This phone line is not available: <number>
Explanation:  The telephone line specified is not currently available.
User Response:  Press F12 to cancel this screen, free up a line, and then retry the operation.

EXH0022  The Voice Application Developer program was canceled by Ctrl+Break.
Explanation:  The Voice Application Developer program was stopped abnormally with Ctrl+Break.
User Response:  Double click on the Voice Application Developer icon in the voice system Icon View window to restart the Voice Application Developer.

EXH0023  You must specify a record length.
Explanation:  The Data Length field in the panel has been left blank.
User Response:  Insert the required Data Length and press Enter to process the input.

EXH0024  Key length must be in the range 1-49.
Explanation:  The value inserted for Key length is outside the valid range.
User Response:  Select a value for Key length between 1 and 49 inclusive.

EXH0025  The Database File Create program was canceled by Ctrl+Break.
Explanation:  The Database File Create program was stopped abnormally with Ctrl+Break.
User Response:  To restart the Database File Create program select it from the Database pull-down in the Voice Application Developer screen.

EXH0026  You must specify a record key.
Explanation:  The value for the Record key, in the Display Database Record panel, has been left blank.
User Response:  Enter the name of an existing record key or a ! character to find the next record that matches the search criteria.

EXH0027  You must specify a value in the search criteria field.
Explanation:  You have left the search criteria field in the Display Database Record blank.
User Response:  Enter a valid search criteria in this field. The valid values are: =, <, >, <=, and =>.

EXH0028  You must specify a database file name.
Explanation:  The Database file name has been left blank.
User Response:  Enter the name of an existing Database file.

EXH0029  Could not find this file name: <name>
Explanation:  The named file could not be found.
User Response:  Ensure that the file actually exists.

EXH0030  The Database Record Display program was canceled by Ctrl+Break.
Explanation:  The Database Record Display program was stopped abnormally with Ctrl+Break.
User Response:  To restart the Database Record Display program select it from the Database pull-down in the Voice Application Developer screen.

EXH0031  You must specify an input file name.
Explanation:  The Input file name field on the Load Database panel has been left blank.
User Response:  Insert the name of an existing input file, or press F12 to cancel and exit.

EXH0032  The file you specified was created.
Explanation:  Information message. The Voice System database has been successfully created.
User Response:  No response is required.

EXH0033  The create was canceled.
Explanation:  Information message. The operation to create a voice system database was canceled by the user.
User Response:  No response is required.
EXH0034 The system is processing record: <name>
Explanation: Information message. The named Voice System database record is currently being processed.
User Response: No response is required.

EXH0035 The Database File Load program was canceled by Ctrl+Break.
Explanation: The Database File Load Display program was stopped abnormally with Ctrl+Break.
User Response: To restart the Database File Load program select it from the Database pull-down in the Voice Application Developer screen.

EXH0036 Action <number> referenced in step <number> is no longer defined in: USERACT.TBE.
Explanation: The action referenced in the specified step is not declared to the system in the User Action table, and was not found in the System Action table.
User Response: Check that the System Action table, SYSACT.TBE, is installed in the system. If this is installed correctly, the action must be declared to the system using the User Action editor.

EXH0037 Select step(s) and select a function.
Explanation: The key pressed does not perform a function in this panel.
User Response: The active function keys are displayed at the bottom of the panel.

EXH0038 File: <filename> backed up to file: <filename>
Explanation: Information message. The specified file has been backed up successfully.
User Response: No response is required.

EXH0039 You must specify a value for parameter: <number>
Explanation: The Parameter Value field in the Step Details panel has been left blank.
User Response: Insert a value in this field and press Enter to process the panel information.

EXH0040 The system is processing record: <name>
Explanation: Information message. The named Voice System database record is currently being processed.
User Response: No response is required.

EXH0041 Return Code: <number> must be -1 or in the range 1 through 9999.
Explanation: The value entered in the Go To Step field is outside the valid range.
User Response: The valid range of values for this field is from -1 to 9999.

EXH0042 Press any key to continue.
Explanation: A key must be pressed for the program to continue running.
User Response: Press any key, such as the spacebar.

EXH0043 You must specify a step number.
Explanation: The Step field in the Step Details panel has been left blank.
User Response: Insert a valid number for the step displayed. The Valid range of numbers is displayed in the panel heading.

EXH0044 The action name you specified is not valid.
Explanation: The action name specified is not a valid action.
User Response: Enter the name of a valid System or User action.

EXH0045 The step number must be in the range: <number> to <number>
Explanation: The step number entered is outside the valid range.
User Response: Enter a valid step number which is within the range displayed and press Enter to process the data. Otherwise press F12 to quit.

EXH0046 The renumber was canceled.
Explanation: Information message. You have selected not to continue with the renumbering operation.
User Response: No response is required.

EXH0047 The renumber completed successfully.
Explanation: The renumber operation has completed without error.
User Response: No response is required.

EXH0048 The action file, <filename>, is being updated in another session. This editing session has been canceled.
Explanation: The user action table specified is currently being updated by another user on the system. Multiple simultaneous access is not possible on this file.
User Response: Ask the user editing the table in the other session to close, and then try again.
EXH0056 There are no text only segments in the file.

Explanation: Information message.
User Response: No response is required.

EXH0057 The recording was canceled.

Explanation: Information message. The operation to record a voice segment was canceled by the user.
User Response: No response is required.

EXH0058 There is not enough memory to load the VSVAD.CFG configuration file.

Explanation: The program could not access adequate memory in order to load the contents of the file VSVAD.CFG.
User Response: There is a serious problem with the system which is severely memory constrained. The system should be investigated to find out the reason for this.

EXH0060 Configuration file VSVAD.CFG not found.

Explanation: The configuration file VSVAD.CFG, which is required by the startup program, is not present in the main installation directory.
User Response: Ensure that the configuration file VSVAD.CFG is in voice system installation directory. If necessary, run DirectTalk/2 Setup to recreate the file.

EXH0062 This is the first entry in the list.

Explanation: Information message.
User Response: No response is required.

EXH0064 Could not find the Voice Logic Module.

Explanation: The voice logic module specified could not be found.
User Response: Enter the name of an existing voice logic module.

EXH0065 This parameter is too long: <number>

Explanation: Too many characters have been entered in one of the panel fields.
User Response: Reduce the number of characters in the field indicated by the position of the cursor.

EXH0066 You must specify a name.

Explanation: The Voice Logic Module field has been left blank.
User Response: Enter the name of a voice logic module.

EXH0067 The Edit Action File program was canceled by Ctrl+Break.

Explanation: The User Action editor program was stopped abnormally with Ctrl+Break.
User Response: Choose the User actions selection from the voice Utilities pull-down menu to restart the Voice Application Developer.

EXH0068 Playing Voice Record

Explanation: Information message. A voice segment is currently being played.
User Response: No response is required.

EXH0072 You must specify either PLAY or IF.

Explanation: The Function field in the Change or Insert Line panel in the Voice Logic Module Editor has been left blank.
User Response: The only valid values that can be entered are PLAY and IF. Enter one of these values or press F12 to cancel.

EXH0073 You must specify a Type.

Explanation: The Type field in the Change Line or Insert Line panel in the Voice Logic Module editor has been left blank.
User Response: Insert a valid information type in this field. Valid types may be obtained by pressing F1 for help or from the Application Development User’s Guide.

EXH0074 You must specify Operand 1.

Explanation: The Operand 1 field has been left blank.
User Response: Put an entry in the Operand 1 field and press Enter to process the information, or press F12 to quit.

EXH0075 You must specify a Condition.

Explanation: The IF function has been selected and the Condition field has been left blank.
User Response: Enter a valid Condition in the Condition field. Valid Conditions are listed in the help information and in IBM CallPath DirectTalk/2: Application Development User’s Guide.
EXH0076  You must specify Operand 2.
Explanation: The Operand 2 field has been left blank.
User Response: Put an entry in the Operand 2 field and press Enter to process the information, or press F12 to quit.

EXH0077  The only valid functions for this field are PLAY or IF
Explanation: An invalid entry has been placed in the Function field.
User Response: Change the text in the field to either PLAY or IF, which are the only two valid entries.

EXH0078  The Voice Logic Editor program was canceled by Ctrl+Break.
Explanation: The Voice Logic Module Editor program was stopped abnormally with Ctrl+Break.
User Response: To restart the Voice Logic Module Editor program select it from the Editors pull-down in the Voice Application Developer screen.

EXH0079  Use: SEG, NUM, STR, DAT, DOW, DMD, MD, MDY, TIM, CUR, CTR, MY, TXT, or TSR
Explanation: An invalid entry has been placed in the Type field.
User Response: Enter one of the valid entries listed in the help files and programming guides.

EXH0080  The only valid types for this field are: NUM or STR
Explanation: An invalid entry has been placed in the Type field.
User Response: Enter a valid type in this field and press Enter to process the data, or press F12 to quit.

EXH0081  Maximum characters is 16 for the variable name or the literal text.
Explanation: The maximum number of characters in one of the Operand fields has been exceeded.
User Response: Reduce the number of characters to a maximum of 16 for the variable name or literal text and press Enter to process the data, or press F12 to quit.

EXH0082  Valid conditions are: EQ, GT, LT, NE, GE, or LE
Explanation: In invalid entry has been placed in the Condition field.
User Response: A valid entry should be placed in the condition field. Valid entries are listed in the help text and in the publications.

EXH0087  The add or change was canceled.
Explanation: Information message.
User Response: No response is required.

EXH0088  Maximum characters is 15 for a segment name.
Explanation: When editing a Voice Logic Module a segment name longer than 15 characters has been specified in single quotes. The system does not support segment names longer than 15 characters.
User Response: Reduce the number of characters in the segment name.

EXH0089  The text segment editor was canceled by Ctrl+Break.
Explanation: The Text Segment Editor program was stopped abnormally with Ctrl+Break.
User Response: To restart the Text Segment Editor program select it from the Editors pull-down in the Voice Application Developer screen.

EXH0090  The action was canceled. No connection made.
Explanation: The action to make a phone connection was abandoned and no connection was established.
User Response: No response is required.

EXH0091  You did not specify the correct number of arguments to start this program.
Explanation: An attempt was made to start the program with an incorrect number of arguments.
User Response: Restart the program with the correct number of arguments.

EXH0092  Press Enter to record new data or Press F12 to exit without making changes.
Explanation: An invalid function key has been pressed.
User Response: Press F12 to quit, or one of the valid function keys listed at the bottom of the panel.
EXH0093  The program could not find C_PANELS Library: <filename>.PNL

Explanation: The C-PANELS library specified in the message could not be located.
User Response: Check the integrity of the Voice System installation to ensure that all the files are installed correctly.

EXH0094  The application file is being updated from another session. This editing session was canceled: <text>

Explanation: An attempt has been made to edit an application from two OS/2 sessions at once. The session shown has therefore been canceled.
User Response: The application file can only be edited from one session. In order to edit the application from the current session the other one must be closed.

EXH0095  The Voice Logic Module test has completed.

Explanation: Information message.
User Response: No response is required.

EXH0096  You must type a comment.

Explanation: When Changing or Adding a new Voice Logic Module the Comment text has been left blank.
User Response: Add some text to the Comment field with a brief but meaningful description of the particular function of the Voice Logic Module being edited.

EXH0100  The system is connecting to Database Server: <name>

Explanation: Information message. The system is currently in the process of connecting to the Database Server shown in order to access the required voice system database file.
User Response: No response is required.

EXH0101  You must specify a segment name.

Explanation: The Voice or Text segment name field has been left blank.
User Response: Enter the name required.

EXH0102  This internal work file did not open: <filename>. Call for assistance. The Return Code is: <number>

Explanation: The system attempted to open the file shown which failed with the return code displayed in the message.
User Response: Ensure the disk is not full, otherwise, report this problem to your service representative.

EXH0103  [WARNING] Line: <number> Record definition not valid.

Explanation: When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an invalid record definition. This line has been ignored.
User Response: There is a serious problem with the User Action Table being migrated which should be investigated. At least one of the lines has not been recognised. The file concerned is USRACTTB.TBE.

EXH0105  [ERROR] Line: <number> Missing parameters on action statement.

Explanation: A missing parameter in a User Action has been detected when attempting to migrate a User Action Table from release 1 to release 2. The migration of the User Action Table has been terminated.
User Response: This is a serious problem which should be investigated.

EXH0106  The segment was stored in the database.

Explanation: Information message. The recording of a voice segment was successfully stored in a voice system database.
User Response: No response is required.

EXH0107  Source database <filename> does not exist.

Explanation: The database from which a copy operation is being attempted does not exist.
User Response: Enter the name of an existing database.

EXH0108  [ERROR] Line: <number> The action code is not valid.

Explanation: When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action number out of the valid range of 1 to 95 inclusive. The migration of the User Action Table has been terminated.
User Response: This is a serious problem which should be investigated.

EXH0109  The time allowed to record a voice segment has expired.

Explanation: Information message. The maximum time allowed to record a voice segment has been exceeded.
User Response: You may wish to re-record the segment in order to prevent a cut-off at the end.
EXH0110  [Warning] Line: <number>  The action is already defined.
Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action name which had already been defined. This duplicate name will be ignored.
User Response:  This is a potentially serious problem which should be investigated.

EXH0111  It is ignored.
Explanation:  Continuation of message 0110.
User Response:  See the response for 0110.

EXH0112  You must specify the required data.
Explanation:  An invalid function key was pressed.
User Response:  Fill in the required fields and press Enter to process the data, or press one of the active function keys listed at the bottom of the panel.

EXH0113  The segment has finished playing.
Explanation:  Information message.
User Response:  No response is required.

EXH0114  The system could not find the specified segment.
Explanation:  The segment could not be found in the system.
User Response:  Check that the correct input has been placed in each field.

EXH0116  [Warning] Line: <number>  Action type exceeds 9 characters.
Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action for which the Type was longer than 9 characters.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated. The expected type for a user action would be USER.

EXH0117  You must type at least one line of text.
Explanation:  The field indicated by the position of the cursor has been left blank.
User Response:  Enter some text in this field and press Enter to process the data, or press one of the function keys listed at the bottom of the panel.

EXH0118  The voice segment editor was canceled by Ctrl+Break.
Explanation:  The Voice Segment Editor program was stopped abnormally with Ctrl+Break.
User Response:  To restart the Voice Segment Editor program select it from the Editors pull-down in the Voice Application Developer screen.

EXH0121  You must specify a Copy To segment name.
Explanation:  When attempting to copy a Voice or Text segment the Copy To segment field has been left blank.
User Response:  Enter a segment name and press Enter to process the data.

EXH0122  You must specify a Copy To application name.
Explanation:  When attempting to copy a segment or voice logic module the Copy to Application field has been left blank.
User Response:  Enter the name of an existing application and press Enter to process the data.

EXH0123  It was truncated to 9 characters.
Explanation:  Continuation of message 0116, indicating that the Action Type has been truncated to 9 characters.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated. The expected type for a user action would be USER.

EXH0124  A segment cannot be copied to itself.
Explanation:  An attempt has been made to copy a voice segment to itself.
User Response:  Voice Segments can only be copied to a unique name. Enter the name of a new voice segment, or alternatively copy to another application.

EXH0125  Target database <name> does not exist.
Explanation:  The target database specified could not be located.
User Response:  Ensure that you have specified the correct name of the target database and that it is correctly installed.
EXH0126 The copy was completed successfully.

Explanation: Information message. The copy operation completed without error.
User Response: No response is required.

EXH0127 The voice program editor was canceled by Ctrl+Break.

Explanation: The Voice Program Editor program was stopped abnormally with Ctrl+Break.
User Response: To restart the Voice Program Editor program select it from the Editors pull-down in the Voice Application Developer screen and press Enter.

EXH0128 The entire voice segment is being displayed.

Explanation: Information message. An attempt was made to scroll the voice pattern which could not be carried out since the entire segment is currently being displayed.
User Response: No response is required.

EXH0129 There is not enough memory to load the voice segment.

Explanation: Adequate memory could not obtained from the operating system in order to be able to load the voice segment.
User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to free some memory.

EXH0130 F9 only deletes data to the left of the cursor.

Explanation: Information message. An attempt was made to delete data to the left of the cursor which was not possible since the cursor was situated at the start of the segment.
User Response: No response is required.

EXH0131 F10 only deletes data to the right of the cursor.

Explanation: Information message. An attempt was made to delete data to the right of the cursor which was not possible since the cursor was situated at the end of the segment.
User Response: No response is required.

EXH0132 Use F8 to display the end of the segment, then delete with F10.

Explanation: Information message. An attempt was made to delete right to the end of the segment using the F10 key. The delete right operation can only be performed when the end of the segment is displayed on the screen.
User Response: Use F8 to display the end of the segment, then try again.

EXH0133 Use F7 to display the start of the segment, then delete with F9.

Explanation: An attempt was made to delete left to the start of the segment using the F9 key. The delete left operation can only be performed when the start of the segment is displayed on the screen.
User Response: Use F7 to display the start of the segment, then try again.

EXH0134 You cannot insert silence. The voice segment is already 20 seconds long.

Explanation: Information message. The voice segment is already at its maximum value of 20 seconds and therefore cannot be extended by inserting silence.
User Response: No response is required.

EXH0135 Type a new segment name and press Enter or press F12 to exit.

Explanation: The system is waiting for the user to change another Voice Segment.
User Response: Enter the name of the next segment to be changed or press F12 to go back to the Voice Segment Editor base menu.

EXH0136 The editor is building the voice segment graph.

Explanation: Information message. The editor is currently processing the data required in order to construct the voice segment graph.
User Response: Wait until the editor has finished before attempting any further editing.

EXH0137 [Warning] Line: <number> Action name exceeds 16 characters.

Explanation: When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action for which the Name was longer than 16 characters, which is not allowed. The Action name has been truncated to 16 characters.
User Response: A serious problem with the User Action Table has been detected for which the cause should be investigated.
EXH0140  It was truncated.

Explanation:  Continuation of message 0139. The Action Name has been truncated to 16 characters.
User Response:  See the response for message 0139.

EXH0141  [Warning] Line: <number>  Action missing or misplaced.

Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an unexpected parameter which could not be associated with a corresponding action. All parameter statements should be associated with a specific action.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0142  The statement was ignored.

Explanation:  You are attempting to import a User Action table, but one of the entries in it is invalid. Other messages will indicate which line is in error.
User Response:  Check the other messages and correct the table.

EXH0143  [Warning] Line: <number>  More than 4 parameters defined.

Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action with more than 4 parameters defined. Actions cannot have more than 4 parameters defined.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.


Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained a parameter statement for which a corresponding argument was missing. A parameter statement should have corresponding argument where required. This argument should be r for a required parameter or o for an optional parameter.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0145  Parameter 1 defaulted to: o

Explanation:  This message is displayed in conjunction with message 144 to indicate that due to the missing argument on the parameter statement the parameter has been set to optional. The only valid options for the first argument in a parameter statement are r for required and o for optional.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0146  Parameter 2 defaulted to: Missing_Desc

Explanation:  This message is displayed in conjunction with message 144 to indicate that due to the missing second argument on the parameter statement the parameter description has been set to Missing_Desc.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0147  [Warning] Line: <number>  Required/Optional value not valid.

Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained a parameter statement for which the corresponding Required/Optional entry was not recognised as being valid. Valid values for this argument are r for required or o for optional.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0148  It was defaulted to: O

Explanation:  This message is displayed in conjunction with message 0147 to indicate that due to an invalid Required/Optional entry on one of the action parameters the Required/Optional value has been set to a default of optional.
User Response:  A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0149  [Warning] Line: <number>  Parameter description too long.

Explanation:  When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action for which the Parameter Description was longer than 20 characters. None of the Parameter Descriptions for an action should be longer than 20 characters.
User Response: A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0150 It was truncated to 20 characters.

Explanation: Continuation of Message 149 or Message 151 to indicate that either the Parameter Description or the Parameter Default, or both, have been truncated to 20 characters.

User Response: A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0151 [Warning] Line: <number> Parameter default too long.

Explanation: When migrating User actions from release 1 to release 2, the User Action Table being migrated contained an action for which a Parameter Default was longer than 20 characters. None of the Parameter Defaults for an action should be longer than 20 characters.

User Response: A serious problem with the User Action Table has been detected for which the cause should be investigated.


Explanation: When migrating User actions from release 1 to release 2, the User Action Table being migrated contained a Return Code, or Edge, for which there was no corresponding action.

User Response: A serious problem with the User Action Table has been detected for which the cause should be investigated.


Explanation: When migrating User actions from release 1 to release 2, the User Action Table being migrated contained a Return Code, or Edge, which had missing parameters.

User Response: A serious problem with the User Action Table has been detected for which the cause should be investigated.

EXH0154 [Warning] Line: <number> Return Code number not valid.

Explanation: The return code number in an old format of the Action table has been detected as being invalid.

User Response: This is a warning message to indicate that the file was not in the expected format and unpredictable results may occur. The cause of this error should be investigated.


Explanation: The return code description in an old format of the Action table has been detected as being of an unexpected format.

User Response: This is a warning message to indicate that the file was not in the expected format and unpredictable results may occur. The cause of this error should be investigated.

EXH0156 You must specify a parameter description.

Explanation: A user action parameter has been defined with the Status as Required, but the corresponding Description field has not been completed.

User Response: Place an entry in the Description field at the current cursor position.

EXH0157 The status field must be Blank, R or O to file.

Explanation: You have entered an invalid value in the Status field.

User Response: You must enter one of the valid entries in the Status field, these being R, or O, or left blank if there is no parameter.

EXH0158 The specified name is not a printer.

Explanation: The Printer name specified is not recognised as a valid printer name.

User Response: Enter the name of a valid printer.

EXH0159 The <text> was stored successfully.

Explanation: Information message. The item specified, either text, voice, or segment, was stored successfully.

User Response: No response is required.

EXH0160 The input file name has a syntax error.

Explanation: The input file name specified is not a valid FAT format file name.

User Response: Correct this by entering a valid FAT format file name.
EXH0164  The backup file name has a syntax error.

Explanation: The backup file name specified is not a valid FAT format file name.

User Response: Correct this by entering a valid FAT format file name (a maximum of 8 characters followed by a dot followed by 3 characters, for example "myfile.bak").

EXH0165  The action table is full. Add request canceled.

Explanation: You are attempting to exceed the maximum number of user actions that can be declared to the system.

User Response: The only way you can add a user action to the system is to delete one of the existing entries in the User Action List.

EXH0166  The editor is loading action table file: <filename>

Explanation: The user action editor is loading the specified action table file into memory.

User Response: No response is required.

EXH0167  The system detected an error in the seek function for file: <filename>

Explanation: You have entered an invalid value in the Status field.

User Response: Since you have declared a parameter, the only valid values for the Status field are R or O.

EXH0168  An R or O is required in the status field.

Explanation: A parameter has been defined in the User Action Editor, but the Status field has not been filled in.

User Response: Insert the letter R if the Action Parameter is required or the letter O if the Action Parameter is optional.

EXH0169  Records read: <number> written: <number>

Explanation: Information message. This shows the number of records that have been read and written by the Database Load program.

User Response: No response is required.

EXH0170  The cursor must be on a data line to select a function.

Explanation: The function you have selected can only be performed when the cursor is on a valid line in the editor.

User Response: Place the cursor on a valid line in the editor and retry the operation.

EXH0171  -----> Waiting for record from DB Server <-----

Explanation: Information message. The program is waiting for data to be returned from the database server.

User Response: No response is required.
EXH0180  You must specify one of these search criteria: =, <, >, <= or =>

Explanation:  You have entered an invalid search criterion.

User Response:  Retry the operation using one of the valid search criteria shown.

EXH0181  You may not delete the last bar on the graph.

Explanation:  The last bar on the Voice Segment Editor Bar graph may not be deleted.

User Response:  Cancel the message panel by pressing F12, and perform another action.

EXH0182  The Compress program was canceled by Ctrl+Break.

Explanation:  Information message. The Database Compress program was stopped abnormally with Ctrl+Break.

User Response:  To restart the Database Compress program select it from the Database pull-down in the Voice Application Developer screen.

EXH0183  The system could not create the backup file.

Explanation:  The Database Compress program attempted to backup the file to be compressed, but this could not be completed.

User Response:  Ensure that there is sufficient disk space on the drive where the Voice System is installed for the backup of the database.

EXH0184  The compress completed successfully.

Explanation:  The database compress operation has completed without error.

User Response:  No response is required.

EXH0185  You may not use double quotes (" ) in input.

Explanation:  You have entered one or more double quotes in a field where this is not valid.

User Response:  Replace the double quotes and press Enter to process the data.

EXH0186  The system could not find program: <filename>.

Explanation:  An attempt was made to run the program specified but it could not be found.

User Response:  Ensure that the specified program is installed correctly.

EXH0187  The system could not run program: <filename>.

Explanation:  An attempt to run the named program failed.

User Response:  Ensure that an executable version of the specified program is installed correctly on the system.

EXH0188  There is not enough memory to load program: <filename>.

Explanation:  Adequate memory could not obtained from the operating system in order load the program specified.

User Response:  Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH0189  The system received this unknown error from spawnl: <number>.

Explanation:  An attempt was made to spawn an executable program, and this returned an unknown return code.

User Response:  Make a note of the return code shown, and report this problem to your service representative.

EXH0190  You must specify a Copy From application name.

Explanation:  The Copy from application name field has been left blank.

User Response:  Enter the name of the application to be copied from.

EXH0191  The record length must be a number between 1 and 16000.

Explanation:  A value has been entered for a record length outside the valid range of 1 to 16000.

User Response:  Enter the required record length from 1 to 16000.

EXH0192  Could not find the global configuration file.

Explanation:  The system could not find the global configuration file: VSGBL.CFG

User Response:  Run the DirectTalk/2 Setup program to recreate the file.
EXH0193 Could not find a panel language parameter in global configuration file.

Explanation: The system could not find a panel language parameter in file: VSGBL.CFG

User Response: Run the DirectTalk/2 Setup program to recreate the file.

EXH0194 You must specify a source logic module name.

Explanation: The voice logic module name field for the source of the copy operation has been left blank.

User Response: Enter the name of an existing voice logic module indicated by the the position of the cursor.

EXH0195 The speak was canceled because the phone was hung up.

Explanation: Information message. The operation to play speech from the text-to-speech editor was canceled because the telephone was hung up.

User Response: No response is required.

EXH0196 The record was canceled because the phone was hung up.

Explanation: The operation to record voice was canceled because the telephone was hung up.

User Response: No response is required.

EXH0197 The play was canceled because the phone was hung up.

Explanation: The operation to play voice was canceled because the telephone was hung up.

User Response: No response is required.

EXH0198 You may not use quotes in a name.

Explanation: You have entered a double quote character in a field where this is not valid.

User Response: Remove the quotes in the field at the cursor position.
Database Server Messages (0200-0299)

EXH0200 Unknown DB server return code: <number>
Explanation: The DirectTalk/2 Database Server responded with an unknown return code.
User Response: Report this problem to your service representative.

EXH0201 No session active.
Explanation: The program is attempting to access the DirectTalk/2 Database Server but there is no session with a Node.
User Response: If you are using the DirectTalk/2 APIs, you must open a session with the Database Server before making requests of it. If you are not using the DirectTalk/2 APIs, report this problem to your service representative.

EXH0202 The session ID is not valid.
Explanation: The program is attempting to access the DirectTalk/2 Database Server but there is no session with a Node for the session handle supplied to the API.
User Response: If you are using the DirectTalk/2 APIs, open a session with the Database Server before you make requests of it using the returned handle. If you are not using the DirectTalk/2 APIs, report this problem to your service representative.

EXH0203 Session closed by server.
Explanation: The program is attempting to access the DirectTalk/2 Database Server and the session has been terminated by the Node.
User Response: After restarting the requested Node, retry the failing operation.

EXH0204 Session canceled by server.
Explanation: The program is attempting to access the DirectTalk/2 Database Server but the session has already been terminated by the Node.
User Response: Restart the requested Node, then retry the failing operation.

EXH0205 Server request not valid.
Explanation: The Database Server received an unsupported request code.
User Response: Report this problem to your service representative.

EXH0206 The Database Server cannot open any more files.
Explanation: The Database Server can have up to 96 files open at one time. When this number of files is already open, and the Server receives a request to open a further file, it attempts to close one of the open files. However, files containing locked records cannot be closed.
User Response: Make sure your applications do not lock records in files without freeing those locks as soon as possible afterwards.

EXH0207 Database Server cannot find the file <filename>.
Explanation: The Database Server was requested to access a file that does not exist in the Database Server file directory.
User Response: Correct the specified file name, or create the file, or copy it into the Database Server directory specified during DirectTalk/2 installation.

EXH0208 Database Server cannot open the file <filename>.
Explanation: The requested file cannot be opened because it is currently in use by another application.
User Response: Terminate the application which has the file open, then retry the failing request.

EXH0210 Cannot create file <filename>. It already exists.
Explanation: You are using the name of an existing file for a new file.
User Response: Correct the specified file name, or erase the existing file and retry the request.

EXH0211 Path does not have a lock.
Explanation: The Client is requesting a lock operation but does not currently have any locks.
User Response: If you are using the DirectTalk/2 APIs or Database System Actions, correct the logic of your program. Otherwise, report this problem to your service representative.

EXH0212 Path cannot have more than 3 locks.
Explanation: The Client has requested a lock in a fourth file, but you can have only three locks at a time.
User Response: If you are using the DirectTalk/2 APIs or Database System Actions, correct the logic of your program. Otherwise, report this problem to your service representative.
EXH0213 Cannot have 2 locks on same name.

Explanation: The Client has requested a second lock in the same file, but you can have only one lock at a time in a file.

User Response: If you are using the DirectTalk/2 APIs or Database System Actions, correct the logic of your program. Otherwise, report this problem to your service representative.

EXH0215 Search opcode must be: =

Explanation: The Client has requested a search for a record for update, and the search criterion is not for an equal key match.

User Response: If you are using the DirectTalk/2 APIs or Database System Actions, correct the logic of your program. Otherwise, report this problem to your service representative.

EXH0216 Locking pattern would have caused deadlock.

Explanation: The Client attempted to get locks which would have resulted in waiting forever because of the different sequence of locking done by other programs for the same locks.

User Response: If you are using the DirectTalk/2 APIs or Database System Actions, make sure all your applications lock multiple locks in the same sequence. Otherwise, report this problem to your service representative.

EXH0217 Record locked by another session.

Explanation: Another Client has locked the file or data that you have requested to lock.

User Response: If your system does not support LAN attached users of the VAD (Voice Application Developer), you have either started the VAD twice, or you are attempting to change the same object. If your system supports LAN attached users of the VAD, another user has locked a VAD object and you cannot change it until the other user has filed their changes. Otherwise, report this problem to your service representative.

EXH0240 File damaged.

Explanation: The file being accessed is physically damaged. There should be a message in the Voice System window and system log giving the file name.

User Response: Run the COMPRDB program to compress the file and validate that it is damaged. If the COMPRDB program reports that the file is damaged, run the RECOVDB program to recover as much of the file contents as possible.

EXH0247 Cannot open file in write mode.

Explanation: The Database Server cannot open the file in write mode because it is read only.

User Response: Remove the read-only attribute from the file and retry the failing request.

EXH0253 Cannot write to file <filename>, open by another process.

Explanation: The Database Server cannot open the file in write mode because it is currently in use by another process.

User Response: Terminate the other program currently accessing the file and retry the failing request.

EXH0254 Data Base write attempted in session opened read only.

Explanation: A Client declared intent to change a file and the session opened with the Database Server was declared read-only.

User Response: If you are using the DirectTalk/2 APIs or Database System Actions, correct the logic of your program. If not, report this as a problem.

EXH0257 Data Base write failed, disk full.

Explanation: The request made of the Database Server to output a record failed due to the disk being full.

User Response: Delete some unwanted files from the disk containing the Database Server directory and retry the failing request.

EXH0260 Command server not responding.

Explanation: The DirectTalk/2 Operating System Command Server is not responding to the previous request.

User Response: The request was probably an interactive Operating System Command which is waiting for input. The Server does not support interactive commands. It will eventually time out. You can then request another command to be executed. Do not request the Server to execute commands which require additional input.

EXH0299 Could not find the file directory record for file: <filename>

Explanation: A DirectTalk/2 Database object is damaged. The directory record is missing.

User Response: Restore the most recent backup of the specified file.
NetBIOS Messages (0300-0599)

**EXH0301**  
**Network Error:** The buffer length is incorrect.  
**Explanation:** An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 01  
**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0303**  
**Network Error:** The specified command is not valid.  
**Explanation:** An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 03  
**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0305**  
**Network Error:** The time limit for a response was exceeded.  
**Explanation:** Explanation 1: If you are using the timeout parameters on a DirectTalk/2 API, they may be set too low.  
**User Response:** Increase the value of the DirectTalk/2 timeout parameters, and retry the failing operation.  
**Explanation:** Explanation 2: If your session partner is on a different LAN segment, the LAN segment interconnection is probably introducing delays.  
**User Response:** Increase the NetBIOS and/or 802.2 timeouts, and retry the failing operation. See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0306**  
**Network Error:** The program received only part of a message.  
**Explanation:** The message received was not complete.  
**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0307**  
**Network Error:** Data was not received.  
**Explanation:** No data was received with the message.  
**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0308**  
**Network Error:** The session was stopped by the server.  
**Explanation:** The partner you were in session with has terminated.  
**User Response:** Retry the failing operation. It should now fail with a different message number which should give you a better definition of the problem. See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0309**  
**Network Error:** There are not enough resources available.  
**Explanation:** The system has insufficient Operating System resources.  
**User Response:** Retry the failing operation. If it still fails, terminate some running applications to free resources. See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

**EXH0310**  
**Network Error:** The session was stopped by the server.  
**Explanation:** The partner you were in session with has terminated.  
**User Response:** Retry the failing operation. It should now fail with a different message number which should give you a better definition of the problem. See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.
EXH0311  Network Error: The session was canceled.
Explanation: A NetBIOS session was terminated.
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0313  Network Error: The specified name <name> is a duplicate.
Explanation: A duplicate Client network name (named in the message) has been encountered.
User Response: Try one of the following:
- If the specified name is provided by you as a parameter to a DirectTalk/2 API, change the name to a unique one for the local Node.
- If the Client name is generated by DirectTalk/2, report this as a problem to your service representative. See LAN Technical Reference, SC30-3587, for additional information.

EXH0314  Network Error: There are not enough NetBIOS name table entries available.
Explanation: More LAN sessions are being opened than was declared on the first LAN session opened in this process.
User Response: Try one of the following:
- If you are using a DirectTalk/2 API and opening the first LAN session in the process, increase the session count parameter supplied to the API. (Do not set the session count parameter too high or you may exceed the NetBIOS resources configured by LAPS, an error indicated by Message EXH0356.)
- If DirectTalk/2 is doing the first LAN session open in the process, reconfigure the system, specifying an increased value for the number of LAN sessions required for an application. This results in a change of the TR_SESSIONS= parameter in VSEXEC.CFG. See LAN Technical Reference, SC30-3587, for additional information.
If neither of the above solves the error, report this problem to your service representative.

EXH0315  Network Error: The name to be deleted is in active session.
Explanation: A request was made to delete a NetBIOS name which is in use.
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0317  Network Error: The session table is full.
Explanation: More LAN sessions are being opened than was declared on the first LAN session opened in this process.
User Response: Try one of the following:
- If you are using a DirectTalk/2 API and opening the first LAN session in the process, increase the session count parameter supplied to the API. (Do not set the session count parameter too high or you may exceed the NetBIOS resources configured by LAPS, an error indicated by Message EXH0356.)
- If DirectTalk/2 is doing the first LAN session open in the process, reconfigure the system, specifying an increased value for the number of LAN sessions required for an application. This results in a change of the TR_SESSIONS= parameter in VSEXEC.CFG. See LAN Technical Reference, SC30-3587, for additional information.

EXH0318  Network Error: The system could not open a session <text>.
Explanation: The requested Node is running but has no Requester (Client) paths for you to open a session with.
User Response: You must either:
- Terminate other Client programs accessing the requested Node to free up Client paths on the Node.
- Add Client paths to the Node and restart it.
See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0319  Network Error: The number for the specified name <name> is not valid.
Explanation: An invalid NetBIOS number was specified.
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0320  Network Error: The remote node <name> is not responding.
Explanation: The LAN attached Node named in the message is not running or it is in the process of starting, stopping or suspending.
User Response: Retry the failing operation. If it continues to fail, and the Node is up and running, report
this as a problem. See *LAN Technical Reference*, SC30-3587, for additional information.

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**EXH0321** Network Error: The local node `<name>` is not responding.

**Explanation:** The local Node named in the message is not running or it is in the process of starting, stopping or suspending.

**User Response:** Retry the failing operation. If it continues to fail, and the Node is up and running, report this as a problem. See *LAN Technical Reference*, SC30-3587, for additional information.

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**EXH0322** Network Error: The named server `<name>` is not available.

**Explanation:** Depending upon whether the requested Node is local or LAN attached:

- **Local:** The local Node has no available Requester (Client) paths.
- **LAN attached:** A duplicate Client LAN network name has been encountered.

**User Response:** Depending on whether the requested Node is local or LAN attached:

- **Local:** Add local Requester paths to the Node configuration.
- **LAN attached:** If the specified name is one generated by DirectTalk/2, you have probably configured the system with a Node name which is a duplicate of another on the LAN. If this is the case, reconfigure the system and specify a unique Node name. DirectTalk/2 Node names on a LAN must all be unique.

If the specified name is one provided by you as a parameter to a DirectTalk/2 API, change the name to a unique one. When supplying a Client name to a DirectTalk/2 API, it is a good idea to include the Node name as part of the Client name. This guarantees a unique name and identifies which Node the client resides on.

See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

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**EXH0323** Network Error: The name was deleted.

**Explanation:** A request was made to a NetBIOS name which has been deleted.

**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

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**EXH0324** Network Error: The session ended abnormally.

**Explanation:** The Node you were in session with ended abnormally. It did not properly close the session you had with it.

**User Response:** The Node will have to be restarted before you can restart the session. See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

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**EXH0325** Network Error: The system detected identical names `<name>`.

**Explanation:** An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 19

**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

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**EXH0333** Network Error: The interface is busy.

**Explanation:** An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 21

**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

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**EXH0334** Network Error: The number of allowed commands was exceeded.

**Explanation:** An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 22

**User Response:** See *LAN Technical Reference*, SC30-3587, for additional information. If the error persists, report the problem to your service representative.
EXH0335  Network Error: The adapter number must be 00 or 01.

Explanation:  An internal error has occurred in the interface between the voice system and NetBIOS LAN Support.  Write down the error message if you intend to request technical support.  If you have user developed servers or application actions that access a LAN, they may be the cause of failure.  The NetBIOS return code is: 23

User Response:  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.

EXH0336  Network Error: The command already completed.

Explanation:  An internal error has occurred in the interface between the voice system and NetBIOS LAN Support.  Write down the error message if you intend to request technical support.  If you have user developed servers or application actions that access a LAN, they may be the cause of failure.  The NetBIOS return code is: 24

User Response:  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.

EXH0338  Network Error: You may not cancel the specified command.

Explanation:  An internal error has occurred in the interface between the voice system and NetBIOS LAN Support.  Write down the error message if you intend to request technical support.  If you have user developed servers or application actions that access a LAN, they may be the cause of failure.  The NetBIOS return code is: 26

User Response:  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.

EXH0348  Network Error: The specified name <name> is already defined by others.

Explanation:  A duplicate Client network name (named in the message) has been encountered.

User Response:  If this Client name is one provided by you as a parameter to a DirectTalk/2 API, change the name to a unique one for the local Node.

If the Client name is being generated by DirectTalk/2, report this as a problem.  See LAN Technical Reference, SC30-3587, for additional information.

EXH0352  Network Error: The environment is not defined.  You must issue reset.

Explanation:  An internal error has occurred in the interface between the voice system and NetBIOS LAN Support.  Write down the error message if you intend to request technical support.  If you have user developed servers or application actions that access a LAN, they may be the cause of failure.  The NetBIOS return code is: 34

User Response:  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.

EXH0353  Network Error: There is not enough storage available for a session.

Explanation:  Insufficient memory available to perform requested function.

User Response:  Retry the failing function.  If the failure persists, you will have to terminate other applications running on the system to free up memory resources.  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.

EXH0354  Network Error: The number of applications allowed was exceeded.

Explanation:  An internal error has occurred in the interface between the voice system and NetBIOS LAN Support.  Write down the error message if you intend to request technical support.  If you have user developed servers or application actions that access a LAN, they may be the cause of failure.  The NetBIOS return code is: 36

User Response:  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.

EXH0355  Network Error: There is no SAP available.

Explanation:  An internal error has occurred in the interface between the voice system and NetBIOS LAN Support.  Write down the error message if you intend to request technical support.  If you have user developed servers or application actions that access a LAN, they may be the cause of failure.  The NetBIOS return code is: 37

User Response:  See LAN Technical Reference, SC30-3587, for additional information.  If the error persists, report the problem to your service representative.
EXH0356  Network Error: There are not enough NetBIOS resources defined.
Explanation: Insufficient LAPS resources defined. These resources include three types:
- Sessions
- Commands
- Names
User Response: When the error is occurring, run program TMSCHKNB. This program will display the currently available LAPS resources. One of the above resource types will be a small number. Run LAPS configuration and increase the quantity of this resource type. See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0357  Network Error: The specified NCB address is not valid.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 39
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0358  Network Error: You may not issue reset in this situation.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 3A
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0359  Network Error: The device driver ID is not valid.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 3B

EXH0360  Network Error: The system could not lock the segment.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 3C
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0363  Network Error: The system could not open the device driver.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 3F
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0364  Network Error: The system detected an OS/2 error.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 40
User Response: See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.

EXH0379  Network Error: You must issue reset.
Explanation: An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: 4F
<table>
<thead>
<tr>
<th>EXH0546</th>
<th>Network Error: The CCB completed with an unexpected Return Code.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: F6</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.</td>
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<table>
<thead>
<tr>
<th>EXH0548</th>
<th>Network Error: The system could not open the adapter.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between system and NetBIOS Token Ring LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: F8</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH0549</th>
<th>Network Error: The system detected an adapter handler error.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between system and NetBIOS Token Ring LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: F9</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.</td>
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<thead>
<tr>
<th>EXH0550</th>
<th>Network Error: The system detected an adapter check.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: FA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH0551</th>
<th>Either product or NetBIOS is not properly installed.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: FB</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>EXH0552</th>
<th>Network Error: The system could not perform the required open.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: FC</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH0553</th>
<th>Network Error: The adapter was closed unexpectedly.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: FD</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.</td>
</tr>
</tbody>
</table>
**EXH0555 Network Error: There is a command in process.**

**Explanation:** An internal error has occurred in the interface between the voice system and NetBIOS LAN Support. Write down the error message if you intend to request technical support. If you have user developed servers or application actions that access a LAN, they may be the cause of failure. The NetBIOS return code is: FF

**User Response:** See LAN Technical Reference, SC30-3587, for additional information. If the error persists, report the problem to your service representative.
Telephony Actions Messages (0600-0679)

EXH0600  An error return was received from the voice card software.
Explanation: Internal error; an unusual or unexpected return code has been issued from the voice hardware adapter.
User Response: Other accompanying messages in the Node Message Log may indicate an error you can fix. Verify that your options are set correctly in setup. If you know how to, run the hardware diagnostics on the failing card. If the error persists report the problem to your service representative.

EXH0601  The system received an unexpected Return Code from a voice card.
Explanation: Internal error; an unusual or unexpected return code has been issued from the voice hardware adapter.
User Response: Other accompanying messages in the Node Message Log may indicate an error you can fix. Verify that your options are set correctly in setup. If you know how to, run the hardware diagnostics on the failing card. If the error persists report the problem to your service representative.

EXH0602  The phone is onhook.
Explanation: The requested operation requires a completed telephone connection but the telephone is on-hook and inactive.
User Response: Start a voice operation such as playing or recording after establishing a telephone connection.

EXH0603  The list of terminating DTMF digits is too long.
Explanation: The list of terminating DTMF digits is too long, that is, greater than 32 bytes. Perhaps the end of string is missing.
User Response: Make sure that the list of terminating DTMF digits is less than 32 bytes, or add the terminating null character (X'00') to the string of characters supplied to the action.

EXH0604  The Telephony Server could not access the Database Server.
Explanation: The voice server is unable to get voice recording from the database.
User Response: Ensure that the connection to the database server storing the voice segment is in operation. Ensure that the server name is correct.

EXH0605  The Telephony server cannot get recordings from the Database Server
Explanation: The telephony server is unable to get voice recordings from the database.
User Response: Check your DirectTalk/2 configuration and ensure that the database server is installed correctly.

EXH0606  The system detected a card error while playing voice.
Explanation: Internal error; an unusual or unexpected return code has been issued from the voice hardware adapter. The voice adapter card or its software driver could not complete a play operation.
User Response: Other accompanying messages in the Node Message Log may indicate an error you can fix. Verify that your options are set correctly in setup. If you know how to, run the hardware diagnostics on the failing card. If the error persists report the problem to your service representative.

EXH0607  The Database Server could not perform the delete.
Explanation: The database server was unable to perform the delete operation. The most likely causes are using either the wrong key or the key of a previously deleted item. A more unlikely cause is that the database has been damaged.
User Response: Ensure that the database record has not been deleted, and that the request is for the right database entry.

EXH0608  The system detected a card error while getting DTMF tones.
Explanation: An action to obtain DTMF tones failed.
User Response: Use the Dialogic diagnostics to check for proper operation of the voice adapter. Verify that the DTMF tone source is operating correctly.
EXH0609  The system detected a card error while putting DTMF tones.
Explanation: The voice adapter card was unable to output the DTMF tones as requested by the user application.
User Response: Ensure that the output string contains characters that have DTMF tones. The available tones are for 0–9, *, # and A, B, C, and D.

EXH0610  The system detected a card error while recording voice.
Explanation: The voice adapter card was unable to complete a voice recording. The problem may be a continuous non-silence being interpreted as dial tone.
User Response: Check the message to be recorded. Run diagnostics on the voice adapter.

EXH0611  The Database Server could not put the recording in the database.
Explanation: An error was detected when putting a voice recording in the voice database. The database may be full or not operating.
User Response: Ensure that the database is not full, and is operating correctly.

EXH0612  The specified request code is not valid.
Explanation: A request was issued for a voice service using a request code that is not in the list of supported requests.
User Response: Check the specification of the return code.

EXH0613  The requested line is unavailable.
Explanation: The line that was specified for the current operation is not available at this time.
User Response: Use another line.

EXH0614  There are no appropriate free instances of the requested resource.
Explanation: The telephone line to the text-to-speech server is unavailable.
User Response: Wait for the line to become available.

EXH0615  The system detected an error in the text server.
Explanation: The text-to-speech server has detected an error in its operation which prevents the successful completion of the service request.
User Response: Correct the hardware or software problem at the server.

EXH0616  The system could not find the record in the voice database.
Explanation: The record for the requested key cannot be found in the voice database.
User Response: Use the correct key for the database record. If the key is good, restore the database using a backup copy if the latter is available.

EXH0617  The system could not find the voice database.
Explanation: The voice database does not exist in the database server directory. This could be a name problem.
User Response: Check that the database has not been moved to a different disk or directory.

EXH0618  There is no more disk space available for recording.
Explanation: Disk has filled while trying to write telephony data. This is probably while recording, but may also be while importing or exporting voice segments.
User Response: Clear some disk space, by deleting some unwanted files, and try again. Make sure there is as much space as the disk space warning cushion, as specified in the Integrated Voice configuration.

EXH0619  The Telephony Server cannot make an outbound call. This is not supported.
Explanation: Outbound calls have been disabled by a parameter in the Telephony Server Network Interface. In some countries the regulatory requirements forbid VRUs from generating calls.
User Response: If outbound calls should be allowed, change the Telephony Server Network Interface configuration to enable the system to make them.

EXH0620  There is no more disk space available for recording.
Explanation: The amount of space left on the disk is not enough to hold a voice recording of the time limit specified in the Telephony Server Integrated Voice configuration settings.
User Response: Clear some disk space, by deleting some unwanted files, and try again. Make sure there is as much space as the disk space warning cushion, as specified in the Integrated Voice configuration.
EXH0625 Error accessing sub-component of ADSI segment.

Explanation: The system is trying to access part of the ADSI script data but is unable to do so.

User Response: Ensure the general server and database server are running, then retry the operation.

EXH0626 The caller's telephone is not the correct type for the operation.

Explanation: The system is trying to carry out an operation on a telephone which is unsuitable, for example the system could be trying to download ADSI data to a non-ADSI telephone. Or the caller may have hung up.

User Response: Ensure the caller has the correct telephone for the operation, and has not hung up.

EXH0627 Authority has not been given to perform the requested function.

Explanation: The system is trying to perform an operation it does not have authority to do. For example the system may be trying to download an ADSI FDM script but the caller has refused permission for the script to be downloaded.

User Response: No response is required.

EXH0628 A protocol error occurred when transferring data.

Explanation: An error occurred while the ADSI data was being transmitted. This is probably due to excessive noise on the telephone line or on the caller's telephone.

User Response: Retry the operation using a different telephone line and/or telephone.

EXH0629 The caller is in the wrong state for the function requested.

Explanation: An Extend call action has been attempted but the caller is in the wrong state for the action to complete. For example the caller is not connected and a transfer has been requested.

User Response: Retry the operation, ensuring that the caller is in the right state for the action to complete.

EXH0630 It is not possible to complete the function requested.

Explanation: An Extend call action has been attempted but the final state specified was infeasible. For example if a final state of TRANSFER was requested in the VACallXinit, and then an attempt was made to refer the call using VACallXref.

User Response: Retry the operation with a feasible final state parameter.

EXH0631 The agent is in the wrong state for the function requested.

Explanation: An Extend call action has been attempted but the agent is in the wrong state for the action to complete. For example the agent is already connected when an initialization attempt is made.

User Response: Ensure the agent is in a correct state before the Extend Call action is executed.

EXH0632 An invalid screen level was requested.

Explanation: You must specify a screen level parameter to perform the action VACallXinit. This value defines the minimum level of screening required. Valid values are NONE, FULL, DIALED, or RINGING.

User Response: Specify a valid screen level parameter. For further information see IBM CallPath DirectTalk/2: Application Development User’s Guide, SB35-4408

EXH0648 Missing voice segment <name> in file <filename>

Explanation: The named segment cannot be found in the named file.

User Response: Check the following:-
- The segment has been recorded.
- The segment has been recorded in the current language.
- The segment name and file (otherwise known as database) is correct.
- The server name is correct.

EXH0649 Inconsistency detected by the Telephony Server API.

Explanation: A problem has been detected. It was reported by the Telephony Server API but may have been found within the Telephony Server itself. The message will only occur when an unexpected error is detected.

User Response: Further messages from the Telephony Server in the GSI log may indicate what the problem was. If you cannot fix it this way, or if the error persists, report this problem to your service representative.
The request was stopped by pressing a DTMF tone key.

Explanation: Information message: A request to play a message was ended by the party pressing a key (in other words, the prompt was interrupted by caller input).
User Response: No response is required.

The request was stopped because the other party hung up.

Explanation: Information message: The caller hung up before the service was completed.
User Response: No response is required.

The request was stopped because the allowed time expired.

Explanation: Information message: The time allowed for the service to complete expired before completion.
User Response: No response is required.

The request was ended by the terminating character.

Explanation: Information message: A DTMF input request was ended by the caller entering the designated terminating character.
User Response: No response is required.

The request was ended by receiving the specified number of digits.

Explanation: Information message: A request for DTMF input from the caller was ended by receiving the requested number of digits.
User Response: No response is required.

The called phone was busy.

Explanation: The application or the development system was originating a call and the called number was busy.
User Response: Try again later.

The called phone was not answered.

Explanation: When placing an outgoing call, the phone was not answered in the number of rings specified in the Call Analysis parameters.
User Response: Try again later.

The called phone would not ring.

Explanation: When placing a call, ring was not detected.
User Response: Check the phone line and the number called.

An operator intercepted the call.

Explanation: The call was intercepted by an operator, perhaps because the number is not correct.
User Response: Ensure that the number called is the correct one.

The system could not find the specified line.

Explanation: The application requested a specific line that is not available.
User Response: Request another line.

The specified line is in use.

Explanation: The use of a specific line was requested, but the line is in use by another application.
User Response: Use another line name.

The call was stopped because the other party hung up.

Explanation: The call on the named line was ended because the party hung up before the service was completed.
User Response: Try again.

The called line has an answering machine.

Explanation: An outgoing call has been picked up by an answering machine.
User Response: Call another number.

The system could not recognize the voice response.

Explanation: The voice response was not recognized. The response may not be in the vocabulary.
User Response: Make sure the caller is aware of the expected responses. Make sure the responses are in the vocabulary.
EXH0665  The Telephony Server could not write all the voice data.

Explanation:  The length of the voice message exceeded the allowed limit.

User Response:  Use a shorter message. Make sure the caller is aware of the time limit.

EXH0668  The system did not detect a dial tone and could not make the call.

Explanation:  The initial dial tone required before a number can be dialled was not detected.

User Response:  Check that the line reporting the error is correctly connected to a telephone switch. If enhanced call progress analysis is being used, make sure the dial tone definition is correct for the switch being used. If the line is correctly connected the dial tone may be too quiet - make the dial tone detection type a simple timed wait (change the TS Network Interface parameter or put a W before the number to dial).

EXH0669  The telephony operation was stopped by an external source.

Explanation:  Information message: A node manager stop line request was issued causing the action to stop.

User Response:  No response is required.

EXH0670  The play stopped on voice detection.

Explanation:  Information message: A play voice request (Play_Module) was stopped when noise was detected.

User Response:  No response is required.

EXH0671  The play stopped on recognized voice.

Explanation:  Information message: A play voice request (Play_Module) was stopped when noise was detected. An attempt has been made to recognise the noise as a voice response.

User Response:  No response is required.

EXH0672  The call was answered by a fax machine or modem.

Explanation:  Information message.

User Response:  No response is required.

EXH0673  The function terminated because there was no response.

Explanation:  Information message: A voice recording, or a continuous voice recognition, terminated because a period of silence was detected.

User Response:  If the silence period for the voice recording is too short it can be changed using the Telephony Server Voice Processing configuration settings. The silence period for continuous voice recognition (using VCS technology) is determined by the system based on the number of digits requested.
Voice Application Developer Messages (0680-0699)

EXH0680  No text segments imported.
Explanation: Information message
User Response: No response is required.

EXH0681  One text segment was imported.
Explanation: Information message
User Response: No response is required.

EXH0682  <number> text segments were imported.
Explanation: Information message
User Response: No response is required.

EXH0683  No files match the file mask.
Explanation: Information message
User Response: No response is required.

EXH0684  File does not exist or cannot be accessed.
Explanation: The text segment editor could not find the file, or the file could not be accessed
User Response: Check that the filename was specified correctly.

EXH0685  Wildcard characters may only be used in filename.
Explanation: Wildcard characters were found in a directory name by the text segment editor.
User Response: Enter a specific directory name and retry.

EXH0686  Filename is invalid.
Explanation: The filename field was left blank in the text segment editor import panel.
User Response: Put a filename in the field and retry.

EXH0687  Filename is too long to use as a segment name.
Explanation: The filename you have specified for the text segment editor import is too long.
User Response: Specify the name correctly and retry.

EXH0688  You must specify a filename.
Explanation: One of the fields that requires a filename to be entered has been left blank.
User Response: Type an entry into the blank field.

EXH0690  The system was unable to complete the print operation.
Explanation: The print operation to file or printer you requested could not be completed.
User Response: Correct the fault with the print system, or, if printing to file, check that there is a valid directory with enough disk space.

EXH0693  Generating print file for segment <name>.
Explanation: Information message.
User Response: No response is required.

EXH0694  Exporting segment <name> to file <filename>.
Explanation: Information message.
User Response: No response is required.

EXH0695  -----> Writing Temporary Play Segment <-----
Explanation: Information message.
User Response: No response is required.

EXH0698  Application file <filename>, does not exist or cannot be accessed
Explanation: The file shown cannot be found.
User Response: Check that the filename has been specified correctly.

EXH0699  The system cannot load the following panel: <name>
Explanation: The panel shown in the message could not be loaded.
User Response: Check that the panel name has been entered correctly.
Database Server Messages (0700-0799)

EXH0700 The database returned error code: <number> Consult the node message log.

Explanation: This is an internal database error. For more information, consult the GSI console messages to determine which file was being accessed.

User Response: Run the COMPRDB program to compress the file and see if it is damaged. If the COMPRDB program reports that the file is damaged, run the RECOVDB program to recover as much of the file contents as possible. If the file cannot be compressed and cannot be recovered, restore it from a backup copy or from the original source.
General Server Interface Messages (0800-0899)

EXH0803  The GSI closed the session.
Explanation:  The Node containing the Server you were in session with has shut down.
User Response:  The Node must be restarted and the failing function started again.

EXH0804  The GSI canceled the session.
Explanation:  The Node containing the Server you were in session with has shut down.
User Response:  The Node must be restarted and the failing function started again.

EXH0812  There is not enough storage to process the request.
Explanation:  The Node or Server could not allocate enough storage to process the request.
User Response:  Add memory to the Node machine, or shut down some of the programs running on that machine. Then restart the failing function.

EXH0818  The response exceeded the allowed buffer size.
Explanation:  The Server responded with a data longer than the internal buffer used to respond to the client.
User Response:  If you developed the Server, you must change it to not exceed the maximum response length. If the Server is provided by DirectTalk/2, report this error to your service representative.

EXH0823  Invalid client name.
Explanation:  The client name supplied to a DirectTalk/2 API is either a null string or longer than 16 characters.
User Response:  If this error is caused by your use of the APIs, correct your program. If the error is caused by a program supplied by DirectTalk/2, report this error to your service representative.

EXH0836  The Node Manager stopped the server.
Explanation:  The Server you are attempting to access has been stopped by the Node manager.
User Response:  Have the Node Manager operator restart the Server and restart the failing function.

EXH0838  The system detected an error in the server DLL module.
Explanation:  A Node local Server cannot be initialized. The server may be missing or defective, or a DLL which it needs is missing or defective.
User Response:  Make sure you have all the DirectTalk/2 DLL files in a directory named in the LIBPATH= statement in OS/2 file CONFIG.SYS. If you get this error after installing software maintenance, you are probably putting the DLL files in the wrong directory and old ones are being used.

EXH0840  The Node Manager canceled the path to the GSI.
Explanation:  The Node client path you were using to access a Server has been stopped by a Node Manager operator.
User Response:  Have the Node Manager operator restart the client path and restart the failing function.

EXH0846  The server cannot perform the request.
Explanation:  The request code sent to a Server is not valid at this time. The Server understands what the request is, but it cannot perform it for some reason.
User Response:  What action to take next depends on the Server which is giving this error. If it is a User Server, consult with the developer. If the Server is a DirectTalk/2 supplied Server report this error to your service representative.

EXH0852  Non-local servers cannot have fast path sessions.
Explanation:  Only DirectTalk/2 supplied DLL Servers can have client fast path sessions.
User Response:  Report this error to your service representative.

EXH0853  Misrouted request.
Explanation:  A request was sent to the wrong Server.
User Response:  Report this error to your service representative.

EXH0854  The GSI could not recognize the specified server name.
Explanation:  The Node is not configured with the Server your request requires.
User Response:  Install the DirectTalk/2 feature and/or reconfigure the system to include the support for the function you are attempting. If the function requires a User Server, correct the configuration to include the User Server.
EXH0855  An unexpected system error occurred.
Explanation: A internal error condition occurred which cannot be identified.
User Response: Report this error to your service representative.

EXH0860  No paths are available or all are busy or the GSI is stopping.
Explanation: The Node Server paths are all in use.
User Response: Retry the failing function. If this same error occurs again, increase the quantity of Server paths defined in the Node configuration.

EXH0864  The server could not recognize the specified function.
Explanation: The Server does not support the request code you sent to it.
User Response: If you are using the DirectTalk/2 APIs, user written APIs, or a User Server, correct your programs. If not, report this error to your service representative.

EXH0870  The server could not find a required panel file.
Explanation: A file containing the DirectTalk/2 panel definitions is not available. Either the product is installed incorrectly or you are attempting to run the program outside the product directory.
User Response: Correct the installation or run the program in the product directory.

EXH0888  The amount of data exceeded the buffer length.
Explanation: The client sent request data that is longer than the Node internal buffer for requests and responses.
User Response: If you developed the client program, you must change it to not exceed the maximum request length. If the client program is provided by DirectTalk/2, report this error to your service representative.

EXH0890  There are not enough resources available to start the path.
Explanation: The Node cannot start a Client or Server path because the required resources are not available.

If the path is a Client path, this error is caused by insufficient:
- Threads: THREADS= parameter in CONFIG.SYS missing or too low a number.
- RAM installed, or too many applications running on machine.

If the path is a Server path, this error is caused by insufficient:
- Communications resources for Servers defined as remote.
- RAM installed or too many applications running on machine.

User Response: Correct the above condition by increasing resource or reducing the number of other programs running on the same machine.
Voice Server Messages (1000-1999)

Note: Messages EXH1000 — EXH1999 were generated by the DirectTalk/2 Version 1 Voice Server which has been replaced by the DirectTalk/2 Version 2 Telephony Server.

These message numbers are not reused.
EXH2005 • EXH2020

Configuration, Node Management, and GSI Messages (2000-2499)

EXH2005 There are not enough NetBIOS resources to run all the applications on the LAN.
Explanation: The system has run out of NetBIOS Sessions, Commands or Names resources.
User Response: Running program TMSCHKNB.EXE will show you how many of the above resource types you have at any given instant. When you have determined which resource you need more of, run LAPS configuration and allocate more. If you cannot allocate more, you must stop other applications running on the LAN to free up resources.

EXH2006 There is not enough memory available for: <text>
Explanation: This indicates that the system was unable to allocate memory for a required internal table.
User Response: Install more memory on the machine or reduce the memory requirements of other programs.

EXH2009 The program will wait until this time: <time> on this date: <date>
Explanation: Information message, confirming your request for the program to suspend execution of a .CMD file until a certain time and date.
User Response: If the time and date are correct, do nothing. If you have requested an incorrect time and/or date, stop the program by pressing Ctrl+Break and restart it with the correct parameters.

EXH2010 The system could not add a name to the LAN. The Return Code is: <number>
Explanation: There is a problem with a name specified during configuration. The name is either null, or a duplicate, or is longer than 16 characters.
User Response: Correct the name. For additional information, see message EXH0nnn where nnn is the return code displayed in this message.

EXH2013 Press Ctrl+Break to cancel waiting.
Explanation: Information message: Instructions on how to end the waiting program.
User Response: If you wish the program which is waiting to stop, press Ctrl+Break.

EXH2014 The APPC TP_START failed on path: <number> The Return Code is: <number>
Explanation: The initialization of an APPC path to a host system failed. This can happen for a number of reasons; additional following messages may help to identify the specific cause.
User Response: If this is the initial attempt at starting this path, check the configuration parameters of the GSI host APPC feature with the host System Administrator. If the error occurs on a path that is normally operational, the probable cause is that the host application or communication facilities are non-operational. Check the host system applications and communications equipment for availability. Check the host configuration parameters.

EXH2015 A call was received from: <name>
Explanation: Information message: The node named in the message has initiated a LAN network connection to the node here, and is now connected as a client.
User Response: No response is required.

EXH2016 The APPC ALLOCATE failed on path: <number> The Return Code is: <number>
Explanation: A failure was detected during the start of an APPC host transaction. This can happen for a number of reasons; additional following messages may help to identify the specific cause.
User Response: If this is the initial attempt to use the host transaction, check the configuration parameters of the GSI host APPC feature with the host System Administrator. If the error occurs on a path that is normally operational, the probable cause is that the host application or communication facilities are non-operational. Check the host system applications and communications equipment for availability. Check the host configuration parameters.

EXH2017 The end of the waiting period arrived.
Explanation: Information message: The program you ran to suspend a .CMD file has now finished waiting the requested time and is ending.
User Response: No response is required.

EXH2020 The waiting period was canceled by Ctrl+Break.
Explanation: Information message: The program you ran to suspend a .CMD file was ended by Ctrl+Break being pressed.
User Response: No response is required.
**EXH2022** This path has stopped: `<number>`. The Return Code is: `<number>`

**Explanation:** A Node Client or Server path has stopped. Either it stopped due to error, or it was stopped by a Node Manager request. The path is not usable until it is restarted. If the path was stopped by a Node Manager request, a Node Manager request is required to restart it. If the stop occurred because of a communications failure, the Node will continue to attempt to restart it until the error condition clears.

**User Response:** Either restart the path using a Node Manager program or wait until the communications failure is recovered. The failure may require the termination of other applications which are using communications resources. If the error cannot be cleared, restart the Voice System at the earliest opportunity.

**EXH2023** The OS/2 _beginthread function failed. The Return Code is: `<number>`

**Explanation:** One of two resources is insufficient:
- Threads: THREADS= parameter in CONFIG.SYS missing or too low a number.
- RAM installed, or too many applications running on machine.

**User Response:** Correct the above condition by increasing resource or reducing the number of other programs running on the same machine.

**EXH2025** This function completed successfully: `<text>`. It ran on node: `<name>`

**Explanation:** Information message.

**User Response:** No response is required.

**EXH2026** Path: `<number>` was stopped by: `<name>`

**Explanation:** Information message: A Node Manager request to stop a path was successful. The name given in the message is the Node Manager operator who requested the stop.

**User Response:** No response is required.

**EXH2027** A requested function failed with Return Code: `<number>`. The GSI block Return Code is: `<number>`

**Explanation:** The Node Manager requested a function which failed. See other nearby messages which will further define the failure. For additional information see also message EXH0nnn where nnn is the Return Code stated in the message.

**EXH2028** The request issued is not valid at this time.

**Explanation:** The request code sent to a Server is not valid at this time. The Server understands what the request is, it cannot perform it for some reason.

**User Response:** What action to take next depends on the Server which is giving this error. If it is a User Server, consult with its developer. If the Server is a DirectTalk/2 supplied Server report this as a problem.

**EXH2029** Path: `<number>` was canceled by: `<number>`

**Explanation:** Information message: A Node Manager request to cancel a path was successful. The name given in the message is the Node Manager operator who requested the cancel.

**User Response:** No response is required.

**EXH2030** Path: `<number>` was started by: `<name>`

**Explanation:** Information message: A Node Manager request to start a path was successful. The name given in the message is the Node Manager operator who requested the start.

**User Response:** No response is required.

**EXH2031** The program was stopped by Ctrl+Break.

**Explanation:** Information message.

**User Response:** No response is required.

**EXH2032** Statistics were written to file: `<filename>`

**Explanation:** Information message: The Node statistics were written to the named file.

**User Response:** No response is required.

**EXH2033** The system will try the function again: `<number>` times.

**Explanation:** This message indicates an error has occurred which may be recoverable. If the function retry is successful, this error will cease.

**User Response:** If the recovery is successful, take no action. If it is not, there will be additional message(s) defining the error.
EXH2038  All retry attempts failed.
Explanation: This message indicates an error has occurred which could have been recoverable but all retry attempts failed.
User Response: Use the additional message(s) defining the error that will occur along with this message to diagnose the problem.

EXH2039  The command completed successfully.
Explanation: Information message.
User Response: No response is required.

EXH2040  The entered file name is not valid.
Explanation: You have requested an operation on a file and the file name supplied is not a valid name using the DOS file naming rules.
User Response: Correct the file name supplied.

EXH2042  Managed node is: <text>mn where mn may be 1-8 characters. Default is: <text>
Explanation: If you specify a Node name parameter to the program at startup, it must conform to the format shown in the message.
User Response: Correct the parameter supplied to the program or take the default Node name (the local Node).

EXH2045  The system could not find configuration file: <filename>
Explanation: One of three conditions causes this error:
- The configuration file named in the message is missing.
- You are attempting to execute a DirectTalk/2 program outside the product directory.
- The product directory is not in the DPATH= statement in CONFIG.SYS.
User Response: Correct the above condition which applies.

EXH2046  Path number is: <text>p where p is path to perform function on. Default: <number>
Explanation: If you specify a path number parameter to the program at startup, it must conform to the format shown in the message.
User Response: Correct the parameter supplied to the program.

EXH2047  The statement ending at line: <number> should start with: <text>
Explanation: A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.
User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2048  Preceding message(s) - failure starting configuration: <filename>
Explanation: This message identifies the configuration file which cannot be started.
User Response: Additional error messages will identify why the configuration file cannot be started. Correct the problem indicated in these messages.

EXH2049  The first configuration statement must define the node. It should start with: <text>
Explanation: A Node configuration parameter file has incorrect syntax or invalid parameters for the first statement.
User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2050  The statement ending at line: <number> has this unknown statement type: <text>
Explanation: A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.
User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2051  The statement ending at line: <number> has this name of incorrect length: <name>
Explanation: A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.
User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.
EXH2052  The statement ending at line: <number>
has this unknown parameter: <text>

Explanation:  A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response:  Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2053  The statement ending at line: <number>
is missing a required parameter: <text>

Explanation:  A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response:  Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2054  The statement ending at line: <number>
has an incorrect value for parameter: <text>

Explanation:  A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response:  Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2055  The statement ending at line: <number>
has this value that is not valid: <text>

Explanation:  A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response:  Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2056  DLL Load failed with Return Code:
<number>  The local server program is:
<name>

Explanation:  The local DLL Server named in the message could not be loaded.

User Response:  Make sure you have the all DirectTalk/2 DLL files in a directory named in the

LIBPATH= statement in OS/2 file CONFIG.SYS. If you get this error after installing software maintenance, you are probably putting the DLL files in the wrong directory and old ones are being used.

EXH2057  This local server DLL module: <filename>
must have this entry: server()

Explanation:  A DLL defined as an extended interface Server does not have the required entry point server().

User Response:  If this is a User Server, correct the source code or .DEF file so that the DLL supplies a server() routine to handle requests. Note that the name exported by the DLL will be _server() for 16 bit Servers and server() for 32 bit Servers. If this is a DirectTalk/2 supplied Server, report this as problem.

EXH2058  The statement ending at line: <number>
has this conflicting parameter: <text>

Explanation:  A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response:  Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2059  Path: <number> answering host: <name>
is ready.

Explanation:  Information message: A Node path is ready for work.

User Response:  No response is required.

EXH2060  Path: <number> answering: <name>
is ready.

Explanation:  Information message: A Node path is ready for work. The name given is the NetBIOS LAN network name.

User Response:  No response is required.

EXH2061  Path: <number> answering local is ready.

Explanation:  Information message: A Node path is ready for work.

User Response:  No response is required.

EXH2062  Path: <number> to server program:
<name> is ready.

Explanation:  Information message: A Node path is ready for work.

User Response:  No response is required.
EXH2063 Initialization failed with Return Code: <number>
Local server: <name>

Explanation: The Node initialization could not complete due to an error.

User Response: If additional error messages are present, use them to diagnose the problem. If the error is due to a return code from a User Server, correct the User Server. If you cannot correct the condition, report this as a problem.

EXH2064 Stop failed with Return Code: <number>
The local server is: <name>

Explanation: The Server named in the message failed to shutdown correctly.

User Response: If additional error messages are present, use them to diagnose the problem. If the error is due to a return code from a User Server, correct the User Server. If you cannot correct the condition, report this as a problem.

EXH2065 Path: <number> to host: <name> is ready.

Explanation: Information message: A Node path is ready for work.

User Response: No response is required.

EXH2066 Path: <number> calling: <name> is ready.

Explanation: Information message: A Node path to a LAN attached Node or Server is ready for work. The name given is the NetBIOS LAN network name.

User Response: No response is required.

EXH2067 Path: <number> calling local server: <name> is ready.

Explanation: Information message: A node path from the node named in the message to a local non DLL is ready for work.

Note: An Alert is not sent for the OS/2 Command Server.

User Response: No response is required.

EXH2068 Path 0 to node: <name> is ready.

Explanation: Information message: The Node Management is ready for work. You can now make Node Management requests.

User Response: No response is required.

EXH2069 A call failed with Return Code: <number>
The server is: <name>

Explanation: A LAN attached Node or Server cannot be contacted. The most common cause is the other Node or Server is not running or is in the process of starting up.

User Response: Refer to message EXH0nnn where nnn is the return code in the message for more information. The Node issuing this message will keep attempting to contact the LAN attached Node until successful.

EXH2070 The statement ending at line: <number> has this name that is not valid: <name>

Explanation: A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2071 The statement ending at line: <number> has this duplicate name: <name>

Explanation: A statement in a configuration parameter file has a name parameter which occurs elsewhere in the file. You must supply a unique name for the parameter.

User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.

EXH2072 The statement ending at line: <number> has this parameter that is not valid: <text>

Explanation: A statement in a configuration parameter file has incorrect syntax or invalid parameters. The ending line number is given in the message.

User Response: Additional error messages will identify the file in error. If you have manually edited a configuration file, correct the statement. If the file was generated by DirectTalk/2 configuration, report this as a problem.
EXH2073 Server name for server functions is: <text>s where s is server name.

Explanation: If you specify a Server name parameter to the program at startup, it must conform to the format shown in the message.

User Response: Correct the parameter supplied to the program.

EXH2075 The APPC RECEIVE failed on path: <number> The Return Code is: <number>

Explanation: An APPC receive data from the host has failed. If the cause is temporary, the problem could be corrected automatically. When the cause of the failure has been corrected, the path will reinitialize and be available again. The most likely cause is one of the following:

- Host system or applications have failed or have been shut down.
- Host communication facilities have failed (line, modems, and so on).
- Host applications are terminating abnormally owing to a program or resource problem.

Additional following messages may help to identify the specific cause.

User Response: Ensure that host system and applications are running and available. If necessary, correct the communications facilities (line, modem) problem.

EXH2076 The APPC SEND failed on path: <number> The Return Code is: <number>

Explanation: An APPC send data to the host has failed. The GSI will attempt to restart the path. If the cause is temporary, the problem could be corrected automatically. When the cause of the failure has been corrected, the path will reinitialize and be available again. The most likely cause is one of the following:

- Host system or applications have failed or have been shut down.
- Host communication facilities have failed (line, modems, and so on).
- Host applications are terminating abnormally owing to a program or resource problem.

Additional following messages may help to identify the specific cause.

User Response: Ensure that host system and applications are running and available. If necessary, correct the communications facilities (line, modem) problem.

EXH2077 There is no APPC INVITE on path: <number> The Return Code is: <number>

Explanation: An internal error occurred causing DirectTalk/2 to become unsynchronized with the APPC host.

User Response: Report this as a problem.

EXH2079 Local server DLL module: <filename> must have entry: <text>

Explanation: A DLL defined as an simple interface Server does not have the named entry point configured.

User Response: If this is a User Server, correct the source code or .DEF file so the server supplies a server() routine to handle requests. Note that the name exported by the DLL will be preceded by an underscore if it is a 16 bit module. If this is a DirectTalk/2 supplied Server, report this as problem to your service representative.

EXH2082 This node connection does not answer: <name>

Explanation: The Node named in the message does not respond to your connection request.

User Response: If you are supplying the correct Node name to the function, retry the failing operation, otherwise correct the Node name. If you cannot contact the Node, inform the owner of the Node that it is not responding. It is probably not running.

EXH2083 This node connection is busy: <name> Try again later.

Explanation: Another client already has the Node in use.

User Response: Retry the request.

EXH2084 The system could not find a path to server: <name>

Explanation: The Node or Server named in the message is not defined in the local configuration file.

User Response: Reconfigure the Node and add the name as a LAN attached Node or Server.

EXH2085 This node connection is busy or unavailable: <name> Try again later.

Explanation: Another client already has the Node in use or the path to the Node has been stopped due to an error or a Node Manager request.

User Response: Check messages in the Voice System message log for additional information. If the path has stopped, start it using the Node Manager. If
the path is being used by another client, retry the operation.

**EXH2086** The system could not open server panel: <name>  The Return Code is: <number>

*Explanation:* The file containing the Server panels used by the Interactive Node Manager cannot be opened.

*User Response:* This error is caused by one of three things:
- Not all product files not installed properly.
- Product directory not in DPATH= statement in CONFIG.SYS
- Attempting to run Interactive Node Manager in wrong directory.

**EXH2087** The system received this unknown GSI primary return code: <number>

*Explanation:* The return code identified in the message was received from a request to a Node.

*User Response:* Report this as a problem.

**EXH2088** The system could not find panel: <name>

*Explanation:* The Interactive Node Manager opened the file containing the panels, but a panel is missing.

*User Response:* If you are sure you have completely installed the product or maintenance, report this as a problem.

**EXH2089** Server: <name> was stopped by: <name>

*Explanation:* Information message: The named Server was stopped by the named Node Manager Operator.

*User Response:* No response is required.

**EXH2090** All requester paths are being stopped.

*Explanation:* Information message: The Node will no longer accept client requests because it is shutting down.

*User Response:* No response is required.

**EXH2091** All server paths are being stopped.

*Explanation:* Information message: The Node will no longer accept client requests because it is shutting down.

*User Response:* No response is required.

**EXH2092** Tracing is on for: <number> paths.  Performance degradation may occur.

*Explanation:* Information message: The Node is currently tracing due to D= parameters in the Node configuration file.

*User Response:* If you do not want tracing, shut down the node and remove all D= parameters from the Node Configuration file. See “SSGSI.CFG” on page B-4.

**EXH2093** Server: <name> was stopped by: <name>

*Explanation:* Information message: The named Server was stopped by the named Node Manager Operator.

*User Response:* No response is required.

**EXH2094** This program was unloaded: <filename>

*Explanation:* Information message: The DLL Server module named has been unloaded.

*User Response:* You can replace the DLL now if you want to.

**EXH2095** Server: <name> was started by: <name>

*Explanation:* Information message: The named Server was started by the named Node Manager Operator.

*User Response:* No response is required.

**EXH2096** The server panel made an incorrect response. The request was canceled.

*Explanation:* There is a synchronization problem between the Interactive Node Manager and the Server.

*User Response:* If there is another Interactive Node Manager user accessing the same Server, wait until they are finished. If this is not the case, report this as a problem.

**EXH2097** Could not open trace file for this path: <number>  The error code is: <number>

*Explanation:* Tracing has been requested but the trace file could not be opened. This could be caused by the hard disk running out of space or too many trace files being requested at the same time.

*User Response:* Request fewer traces or free up some disk space.

**EXH2098** System to be re-booted requested by: <name>

*Explanation:* Information message: A Node is being rebooted by the Node Manager Operator named in the message.

*User Response:* No response is required.
EXH2101  The APPC RECV_ALLOC failed on path: <number> The Return Code is: <number>

Explanation:  An APPC “receive an allocation” call from the host has failed. If the cause is temporary, the problem could be corrected automatically. The GSI will attempt to restart the path. When the failure has been corrected, the path will reinitialize and be available again. The most likely cause is one of the following:

- Host system or applications have failed or have been shut down.
- Host communication facilities have failed (line, modems, and so on).
- Host applications are terminating abnormally owing to programming or resource problem.

Additional following messages may give more help.

User Response: Ensure that host systems and applications are running and available. If necessary, correct the communications facilities problem with the line or modem.

EXH2102  Failure retry count is: <text>r where r is the number. Default is: <number>

Explanation:  If you specify the retry parameter, you must use the format shown in the message.

User Response: If you have specified the parameter incorrectly, correct it.

EXH2103  The system could not open node list file: <filename>

Explanation:  The file named in the message which contains the list of nodes is missing.

User Response: Reconfigure the Node to re-create the file.

EXH2104  Will re-boot system in: <number> seconds.

Explanation:  Information message: The Node machine will be rebooted.

User Response: No response is required.

EXH2105  Request to stop node made by: <name>

Explanation:  Information message: A Node is being stopped by the Node Manager Operator named in the message.

User Response: No response is required.

EXH2106  The session was canceled by: <name>

Explanation:  Information message: A Node session was canceled by the client named in the message.

User Response: If the client should still be in session, investigate why the client stopped. The client will be one of:

- Voice Application Developer (VAD)
- T-REXX application
- VAD application
- User Requester program
- Node Manager program

EXH2107  An external source canceled the session with: <name>

Explanation:  This may be an error. The message informs you that a Node session was canceled by something other than the client. The client is named in the message.

User Response: If you did not do anything to cause the cancellation, investigate why the client stopped. The client will be one of:

- Voice Application Developer (VAD)
- T-REXX application
- VAD application
- User Requester program
- Node Manager program

EXH2108  There was an abnormal end to the session with: <name>

Explanation:  This may be an error. The message informs you that a Node session was canceled by an abnormal termination of the client named.

User Response: If you did not do anything to cause the termination, investigate why the client stopped. The client will be one of:

- Voice Application Developer (VAD)
- T-REXX application
- VAD application
- User Requester program
- Node Manager program

EXH2109  The session ended waiting for a response from: <name>

Explanation:  The session partner did not respond within the maximum wait time. The requested function may have completed but it took too long. The name given is the NetBIOS LAN network name.

User Response: Check to see if the requested...
function did complete. If not, retry the function. If this error is detected by a Node Manager program, the timeout startup parameter can be increased.

**EXH2110** There are not enough paths to open a session with: `<name>`

**Explanation:** The failing program cannot open a session with the Node named in the message because there are not enough client paths configured.

**User Response:** Terminate a running client program which is in session with the Node to free up a path. DirectTalk/2 client programs are Voice Applications, the Voice Application Developer, User Requesters and the Node Managers. To prevent this from occurring, reconfigure the Node to have more local or LAN client paths, depending on whether you are attempting to open a session with a local or LAN attached Node.

**EXH2111** There is not enough storage to open a session with: `<name>`

**Explanation:** The failing program cannot open a session with the Node named in the message because there is not enough memory available.

**User Response:** Terminate other applications and retry the operation.

**EXH2112** The reset command was not issued. Contact your system administrator.

**Explanation:** A NetBIOS command was issued before the LAN adapter was enabled.

**User Response:** If you are using the DirectTalk/2 APIs, check to make sure you have completed an open session function. Otherwise, report this as a problem.

**EXH2113** Could not open a session. Server or node `<name>` did not respond.

**Explanation:** The failing program cannot open a session with the Node named in the message because it does not respond to connect attempts. The Node is probably not running or is in the process of starting.

**User Response:** Retry the failing operation. If not successful, find out why the Node is not running and start it if necessary.

**EXH2114** There are not enough NetBIOS resources to open a session.

**Explanation:** The system has run out of NetBIOS Sessions, Commands or Names resources.

**User Response:** Running program TMSCHKNB.EXE will show you how many of the above resource types you have at any given instant. When you have determined which resource you need more of, run LAPS configuration and allocate more. If you cannot allocate more, you must stop other applications running on the LAN to free up resources.

**EXH2115** Detected an unrecognized error from: `<name>` The error code is: `<number>`

**Explanation:** The failing program named in the message does not understand the error code received. No descriptive message can be issued.

**User Response:** Check the meaning of the error code in Chapter 4, "DirectTalk/2 Return Codes" on page 4-1, and take any appropriate corrective action. If the error persists, report this as a problem to your service representative.

**EXH2117** A panel sequence error occurred. The request was canceled.

**Explanation:** The Server and Interactive Node Manager are out of step. The display currently being updated does not match the one the Server is using. This can be caused if two Node Managers are managing the same Server and both use the same Node Manager Operator name.

**User Response:** Make sure all Node Manager Operators use a unique name for identification. The Node Manager Operator name is set by a startup parameter.

If the Node Manager Operators all have unique names, or only one Node Manager is accessing the Server, and the problem keeps occurring, report this as a problem.

**EXH2118** Could not communicate with host: `<name>` APPC Return Code is: `<number>`

**Explanation:** The Node Manager failed attempting to use a Node APPC path.

**User Response:** Consult APPC documentation for further information on the return code. Note that the return code is displayed in decimal. Check the communication path to the host. Check the installation and configuration. You may need to restart (reboot) the system and restart DirectTalk/2.

**EXH2119** Could not access host: `<name>` APPC Return Code is: `<number>`

**Explanation:** The Node Manager failed attempting to use a Node APPC path.

**User Response:** Consult APPC documentation for further information on the return code. Note that the return code is displayed in decimal. Check the communication path to the host. Check the installation and configuration. You may need to restart (reboot) the system and restart DirectTalk/2.
EXH2120 Could not open message file: <filename>
The Return Code is: <number>

Explanation: The message file named is either not installed, or is not accessible to the failing program.

User Response: Check the installation and configuration. Make sure you are running the program inside the product directory.

EXH2121 Server: <name> was stopped by: <number>

Explanation: Information message: The named Server was stopped by the named Node Manager Operator.

User Response: No response is required.

EXH2122 Server: <name> was started by: <number>

Explanation: Information message: The named Server was started by the named Node Manager Operator.

User Response: No response is required.

EXH2123 The system could not find message number: <number>

Explanation: A message is missing from the message file. The message number is displayed in the message.

User Response: Report this as a problem to your service representative.

EXH2145 This node responds that it has no problems: <name>

Explanation: Information message: The Node being viewed has responded that all Client and Server paths are operational.

User Response: No response is required.

EXH2161 Server: <name> is initializing.

Explanation: This message indicates that the named server is starting initialization.

User Response: None. This message is for information only.

EXH2162 Server: <name> is starting.

Explanation: This message indicates that the named server is starting execution.

User Response: None. This message is for information only.

EXH2163 Server: <name> is stopping.

Explanation: The named server has begun the termination process.

User Response: None. This message is for information only.

EXH2164 For server: <name>, could not open configuration file specified in statement: <number>

Explanation: The configuration file named in the entry of the server in the SSGSI.GSI configuration file could not be opened.

User Response: Ensure that the configuration file for the named server exists and is accessible in the current path. In addition, ensure that the name of the configuration file in the PARM= field of the entry for the server in the SSGSI.CFG configuration file is correct.

EXH2165 For server: <name>, program name in statement: <number> is too long or missing.

Explanation: The name of the program to be used by VSEXEC, VS3270MX, VS5250EH, VS3270EH, VS3270LU or VSASCII was either not found or exceeds the maximum number of 64 bytes allowed.

User Response: Ensure that the name of the program to be used is correctly specified in the configuration file of the named server.

EXH2166 For server: <name>, name in statement: <number> is too long or missing.

Explanation: The NAME= parameter in the configuration file of the server was either missing or contained a name longer than eight bytes.

User Response: Ensure that for each executor or emulator to be started the name is specified in the SSGSI.CFG configuration file, and that it is 1-8 bytes long.

EXH2167 For server: <name>, name in statement: <number> is a duplicate.

Explanation: The name of an executor or emulator is a duplicate.

User Response: Ensure that the names given to executors or emulators are unique.
EXH2168  For server: <name>, startup file name in statement: <number> is too long.

Explanation: The name of the control file for the executor was either not a valid file name or was greater than 64 bytes long.

User Response: Ensure that the control file name is valid and does not exceed 64 bytes.

EXH2169  For server: <name>, the LAN number in statement: <number> is not valid.

Explanation: The TR_ADAPTER= parameter of the statement was either not found or was not 255.

User Response: Ensure that the TR_ADAPTER= parameter is set to 255 in the SSGSI.CFG configuration file.

EXH2170  For server: <name>, statement: <number> is not valid.

Explanation: An unrecognized statement was found in the configuration file of the server.

User Response: Correct or remove the erroneous statement in the SSGSI.CFG configuration file.

EXH2171  The system could not create a queue for server: <name> The Return Code is: <number>

Explanation: An error occurred in attempting to create an OS/2 queue for communications between the server and the executor or emulator. This is an internal system error.

User Response: Report this problem to your service representative.

EXH2172  The system could not initialize server: <name>

Explanation: This message indicates that this server and the GSI cannot start. It is the final message of a series for this server, and indicates a severe error.

User Response: Correct the errors indicated by the preceding error messages.

EXH2173  The system could not create a thread for server: <name> The Return Code is: <number>

Explanation: An internal error occurred in trying to start a control thread in the named server. It could be that the THREADS parameter in the CONFIG.SYS file is too small.

User Response: Increase the THREADS= parameter in CONFIG.SYS and restart your OS/2 system. If the error persists, report this problem to your service representative.

EXH2174  For server: <name>, network name in statement: <number> is too long or missing.

Explanation: The network name to be used by the associated terminal emulator is either missing or is greater than 16 characters in length.

User Response: Supply either a network name in the SSGSI.CFG configuration file, or ensure that the name is less than or equal to 16 characters in length.

EXH2175  For server: <name>, Portmaster card name in statement: <number> is too long or missing.

Explanation: The name of the Portmaster card is missing or is greater than 8 characters long in the specified statement.

User Response: Ensure that a CARD= parameter is coded in the EMULATOR_START statement in the SSGSI.CFG configuration file, and that it is not more than eight characters long.

EXH2176  The startup parameters are not valid for server: <name>

Explanation: Some unidentified parameters were found in the associated configuration file.

User Response: Remove the incorrect parameters from the associated configuration file.

EXH2177  The voice line number is missing for server: <name> Paging is now disabled.

Explanation: Only a voice server name was specified for paging. A voice line number must also be specified.

User Response: If you want to use voice paging, ensure that both a voice server and a voice line are specified in your configuration.

EXH2178  The system could not build required tables for server: <name> The Return Code is: <number>

Explanation: An error occurred whilst trying to create internal locking tables for the server. This is an internal error usually indicating insufficient storage.

User Response: Ensure enough storage is available. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.
EXH2179  The session was stopped by the operator.

Explanation: Confirmation that the operator stopped a session manager or terminal emulator from the Node Manager.

User Response: No response required.

EXH2180  This module: <name>.DLL is defective or not installed, or

Explanation: (The rest of this message is in EXH2181) The named DLL could not be loaded because either it is not installed or the directory containing it is not specified in the LIBPATH= statement in the CONFIG.SYS file.

User Response: Ensure that the named DLL file is installed and is in the LIBPATH= statement. You may need to restart (reboot) the system and restart DirectTalk/2.

EXH2181  The module’s directory is not in the CONFIG.SYS statement LIBPATH=

Explanation: This is a continuation of message EXH2180.

User Response: See message EXH2180.

EXH2182  For server <name>, configuration file keyword <text> has a bad value

Explanation: The configuration file (*.cfg) for server <name> is incorrect: the value for keyword <text> is wrong.

User Response: If you have manually modified this file then review the changes that you made and correct the error. If you have not manually modified it, rerun DirectTalk/2 setup to recreate it. If the error still exists after rerunning setup, then contact your service representative.

EXH2183  The system could not load program: <name> The Return Code is: <number>

Explanation: The program specified in the VSEXEC.CFG, VS3270MS.CFG, VS3270EH.CFG, VS3270LU.CFG or VSASCII.CFG could not be loaded.

User Response: Ensure that the name given for the session manager or terminal emulator is correct and is available in the current path.

EXH2184  The session has stopped.

Explanation: An error caused a session manager or terminal emulator to stop. This message is placed in the log for the stopped program. It is preceded in the log by a message indicating the error conditions.

User Response: Determine why the session manager or terminal emulator failed, correct the problem, and then restart from the Node Manager.

EXH2185  For server <name>, you requested use of NETBIOS and the required DLL is

Explanation: NETBIOS usage has been requested but the NETBIOS DLL file cannot be found. It is either not installed or else the directory in which it resides is not named in the LIBPATH= statement of the CONFIG.SYS file.

User Response: Ensure that NETBIOS is installed in OS/2.

EXH2186  For server <name>, either not installed, defective, or not in LIBPATH=

Explanation: This is a continuation of message EXH2185.

User Response: See message EXH2185.

EXH2187  Server: <name> at node: <name> is busy or stopped.

Explanation: The Server in the message is not available at the moment because it is either busy or stopped. Display the Server paths to determine which is the case.

User Response: If the Server is stopped, start it. If the Server is busy, stop a client in session with the Server to free up a path. DirectTalk/2 client programs are Voice Applications, the Voice Application Developer, User Requesters and the Node Managers. To prevent this from occurring, reconfigure the Node to have more Server paths.
EXH2190  Program: <name> has <number> startup parameters.

Explanation:  The program you are starting requires startup parameters. Additional messages will describe them.

User Response:  Restart the program, supplying the required startup parameters and any optional parameters you want to use.

EXH2191  <number> parameters are required:

Explanation:  The program you are starting requires startup parameters. Additional messages will describe them.

User Response:  Restart the program, supplying the required startup parameters and any optional parameters you want to use.

EXH2192  <number> parameters are optional:

Explanation:  The program you are starting has optional startup parameters. Additional messages will describe them.

User Response:  Restart the program supplying the required startup parameters, and any optional parameters you want to use.

EXH2193  NetBIOS adapter number: <text>-n where n=0,1,2,3,255(local). Default is 255.

Explanation:  This message describes the local or LAN adapter number parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2194  Language is: <text>-l where l is the language character. Default is: <text>

Explanation:  This message describes the language parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2195  Timeout is: <text>-t where t is number of seconds. Default is 10.

Explanation:  This message describes the send/receive timeout parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2196  Screen auto refresh time is: <text>-r where r is number of seconds. Default is 3.

Explanation:  This message describes the display auto refresh delay parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2197  Node list file name is: <text>-ln where ln may be 1-12 characters. Default is: <filename>

Explanation:  This message describes the name of the Node list configuration file parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2198  Node Manager name is: <text>-nm where nm may be 1-16 characters. Default is: <text>

Explanation:  This message describes the Node Operator name parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2199  Name to call for local node is: <text>-cn where cn may be 1-16 characters. Default is: <text>

Explanation:  This message describes the local Node name parameter.

User Response:  Respond with the parameter in the format shown if the default is not the desired value.

EXH2200  All startup parameters must start with a minus (-) character.

Explanation:  Required and optional startup parameters must all begin with the minus sign.

User Response:  Restart the program, using the correct format for all parameters. Example:

TMSV2 -sVS_NODE_MGR -t65 -nMgr_Oper_Name

EXH2201  This is not a recognized startup parameter: <text>

Explanation:  The startup parameter is not supported. Additional messages will describe the available parameters.

User Response:  Correct the invalid startup parameter.
EXH2202 This is an incorrect startup parameter value: <text>

Explanation: The startup parameter is supported but has an invalid value. An additional message will describe the proper parameter setting.

User Response: Correct the invalid startup parameter.

EXH2203 Answer name is: <text>-an where an may be 1-16 characters.

Explanation: The program was started without the required name of the Node.

User Response: Restart the program with the required parameter.

EXH2204 This node has no servers defined: <name>

Explanation: The Node named in the message has no Servers defined. Nodes with client paths and no Servers are of no use except for testing.

User Response: Reconfigure the Node with at least one Server.

EXH2205 This node has no requesters defined: <name>

Explanation: The Node named in the message has no Client Paths defined. Nodes with Servers and no Client Paths are of no use except for testing.

User Response: Reconfigure the Node with at least one Client Path.

EXH2206 The specified server does not support viewing.

Explanation: You are attempting to interact with a Server which does not support viewing its resources.

User Response: Select another Server.

EXH2207 Key not active.

Explanation: The key you pressed is not active for this display.

User Response: Press a key listed at the bottom of the display.

EXH2208 This node has been started again since the last display: <name>

Explanation: This message informs you that the Node being shown has been restarted since you last refreshed the display.

User Response: Back out to the main window to reset all lower level windows being displayed.

EXH2209 The system could not open server database: <filename>

Explanation: The file name displayed in the message cannot be opened.

User Response: Ensure that the file is present in the Database directory and is not in use by another client.

EXH2210 A statement is too long. There must be a missing semicolon (;) at end.

Explanation: The configuration file has a statement which is too long. Statements must be ended with a semicolon. It is likely that a statement in your configuration file has no such semicolon, which causes the next statement to be included on the end of it.

User Response: Check that the statements in your configuration file are not too long, and all have semicolons on the end.

EXH2211 The program stopped because the session ended.

Explanation: Information message: The client has ended, thus stopping the session with the Node.

User Response: No response is required.

EXH2212 The maximum number of open files was exceeded.

Explanation: The program has attempted to open more than the OS/2 maximum number of open files.

User Response: Terminate some other applications and retry the failing operation. If unsuccessful, report this as a problem.

EXH2213 The system could not initialize local server: <name> The Return Code is: <number>

Explanation: A DLL Server has returned a non-zero return code from its initialization routine. Additional messages should define what the specific failure is.

User Response: Use the additional messages from the Server to determine the correct action. If the Server is not supplied by DirectTalk/2, contact the supplier.

EXH2214 This server is running: <name>

Explanation: Information message.

User Response: No response is required.

EXH2215 This server is stopped: <name>

Explanation: Information message.

User Response: No response is required.
EXH2216  The system could not start the specified program. You may need to install file: <name>.DLL
Explanation: The DLL named in the message could not be loaded.
User Response: Either the DLL is missing or the directory containing it is not in LIBPATH= in CONFIG.SYS.

EXH2217  The specified path number is not valid.
Explanation: You have entered a path number which is not valid for the Node.
User Response: Enter a valid path number. If you do not know the correct path number, display Client or Server path lists to get the valid numbers.

EXH2218  The system could not find the configuration file needed for alerts.
Explanation: The configuration file for alerts (VSALERTS.CFG) was not found in the current directory. This file is required for alerts to be sent to the host.
User Response: If alerts to the host are required, you must build the file by running DirectTalk/2 Configuration and specifying Alerts.

EXH2219  The communications feature needed for alerts is not completely installed.
Explanation: An attempt was made to send an alert but not all of the necessary components of the Communications Feature were installed.
User Response: Ensure that the Communications Feature is fully installed and operational.

EXH2220  The system will not send alerts to the host.
Explanation: This is the last message of a set of messages explaining why alerts will not be sent to the host.
User Response: No response is required.

EXH2221  The system name for alerts is missing or not valid.
Explanation: The system name for alert purposes was not found in the VSALERTS.CFG file.
User Response: Ensure that the system name for alerts is coded in the VSALERTS.CFG file and is not more than 8 characters long.

EXH2222  The Portmaster card name for alerts is missing or not valid.
Explanation: The Portmaster logical “card name” was not found in the VSALERTS.CFG file, or was longer than 8 characters.
User Response: Ensure that the Portmaster logical “card name” is coded in the VSALERTS.CFG file and is not longer than 8 characters.

EXH2223  The product number needed for alerts is missing or not valid.
Explanation: The product number which is used for alert purposes was not found in the VSALERTS.CFG file, or it is longer than 8 characters.
User Response: Ensure that the product number is included in the VSALERTS.CFG file and is not longer than 8 characters.

EXH2224  The configuration file for alerts has a statement that is not valid.
Explanation: A statement in the VSALERTS.CFG file is not valid.
User Response: Remove or correct the relevant statement in the VSALERTS.CFG file.

EXH2225  The module: VSAMUX.DLL needed for alerts is incorrect.
Explanation: The alerts support module VSAMUX.DLL was not found.
User Response: Ensure that the module VSAMUX.DLL is installed and that its path is in the LIBPATH= statement in the CONFIG.SYS file.

EXH2226  This session stopped due to error: <name>.
Explanation: The named session manager or terminal emulator stopped due to an error. This message is sent as part of an alert to that effect.
User Response: Review the session log for the named application session to determine the cause of the application termination.

EXH2227  A trace of path: <number> was started or altered by: <name>.
Explanation: Information message. The name given in the message is the node operator.
User Response: No response is required.
EXH2228  A trace of path: <number> was stopped by: <name>

Explanation: Information message. The name given in the message is the node operator.
User Response: No response is required.

EXH2229  The system cannot continue. This feature is missing: <name>

Explanation: A DirectTalk/2 optional feature is not present and the configuration requires it.
User Response: Install the missing feature or reconfigure the system without it.

EXH2230  The program will sleep for: <number> seconds

Explanation: Information message: The program will wait for the number of seconds displayed.
User Response: No response is required.

EXH2231  Year is not valid.
Explanation: You have entered a year that is not valid.
User Response: Enter a year between 1995 and 2043

EXH2232  Month not in the range: 1-12
Explanation: You have entered a month that is not valid.
User Response: Enter a month between 1 and 12

EXH2233  Day is not valid.
Explanation: You have entered a day that is not valid.
User Response: Enter a day between 1 and 28,29,30 or 31 depending on the month and year.

EXH2234  Hour not in the range: 0-23
Explanation: You have entered an hour that is not valid.
User Response: Enter an hour between 0 and 23

EXH2235  Minute not in the range: 0-59
Explanation: You have entered a minute that is not valid.
User Response: Enter a minute between 0 and 59

EXH2236  Restart time must be later.
Explanation: You have entered a restart that is before the suspend time. A Node must suspend before it can restart.
User Response: Correct either the suspend or the restart time.

EXH2237  Request to restart node made by: <name>

Explanation: Information message: A Node restart request has been made by the Node Manager Operator named in the message.
User Response: No response is required.

EXH2238  The node will suspend at: <time>

Explanation: Information message: A delayed Node suspend is pending.
User Response: No response is required.

EXH2239  The system could not open restart file: <filename> The errno is: <number>

Explanation: The restart file created when the Node was suspended cannot be accessed.
User Response: Either the file has been deleted or it is currently being accessed. If you created this file manually, the contents may be incorrect. If none of these is the case, report this as a problem.

EXH2240  Node: <name> or server: <name> is busy or unavailable.

Explanation: Another client already has the Node in use or the path to the Node has been stopped due to error or a Node Manager request.
User Response: Check messages in the Voice System message log for additional information. If the path has stopped, start it using the Node Manager. If the path is being used by another client, retry the operation.

EXH2241  The system is re-booting.

Explanation: Information message: The system is going to reboot.
User Response: No response is required.

EXH2242  The system could not open device driver: <name>

Explanation: This message indicates that DirectTalk/2 cannot open the named device driver.
User Response: Install the missing device driver. The changes to CONFIG.SYS which load the device driver may have been lost. You may need to rerun
DirectTalk/2 Setup. This error can also be caused by not rebooting after install and configuration.

**EXH2243** Immediate stop caused by double Ctrl+Break.

**Explanation:** Information message: The Node has been terminated by pressing Ctrl+Break keys twice. This is done to force a system dump when a Node is not running properly and the dump files are required by product support.

**User Response:** If you pressed Ctrl+Break intentionally to get a system dump, send all .DMP files to product support. If it was accidental, let the dump complete and restart the Node when needed.

**EXH2244** An abnormal stop has occurred.

**Explanation:** An unplanned termination has occurred. This is usually an OS/2 trap in the Node or one of its DLL Servers.

**User Response:** If an OS/2 trap screen appears, record the information displayed. If the module identified in the trap screen is a module supplied by DirectTalk/2 report this as a problem. Otherwise, report the problem to the supplier of the identified module.

For additional debugging information, put a SET GSI_DUMP=YES statement in RUNGSI.CMD and re-create the failure. This set will force a dump when the trap occurs.

**EXH2245** You cannot start a path until it is stopped. Try again later.

**Explanation:** The path you are attempting to start has not completely stopped.

**User Response:** Wait for the path to be displayed as stopped, before trying to restart it.

**EXH2246** This server has no data to display: <name>

**Explanation:** The Server you are attempting to view does support viewing but does not have anything to view yet.

**User Response:** Wait until the Server has time to initialize its display data and retry the operation.

**EXH2247** This database file is damaged: <filename>

**Explanation:** The database file named in the message is damaged. The damage most likely occurred when an abnormal Voice System termination occurred and the file was being changed.

**User Response:** The COMPRDB (compress database) and RECOVDB (recover database) utility programs are used to compress, copy and rebuild database files. These programs run with the Voice System down and can access files on any disk in any directory. Both programs take the damaged file as input and produce a new file as output. The programs will display the required and optional startup parameters if executed with no parameters.

Run the COMPRDB program on the file. If it reports that the file compressed OK, the file should now be ready to use again. If the COMPRDB program reports that the file is damaged, run the RECOVDB on the file. This will recover as much data a possible and rebuild the file. Another option is to use the most recent backup copy of the file.

**EXH2248** This message number is not in the message file: <number>

**Explanation:** A message is missing from the message file. The message number is displayed in the message.

**User Response:** Report this as a problem to your service representative.

**EXH2249** The number of non-fast path requester paths defined: <number> exceeds the maximum allowed: <number>

**Explanation:** The Node configuration file has incorrect QUANTITY= parameters for the total of Client Paths.

**User Response:** Reduce one or more QUANTITY= parameters. If the configuration file was created by running DirectTalk/2 configuration, report this as a problem.

**EXH2250** The system could not find panel library: <name>,PNL

**Explanation:** The screen panel file named in the message is missing or not in the current directory.

**User Response:** Reinstall the product or run the program in the product directory.

**EXH2251** The system could not find panel: <name>

**Explanation:** The screen panel named in the message is missing.

**User Response:** The most probable cause is the partial installation of a new ServicePak or product release. The new screen panel files have not been installed. Make sure you have installed all files in the correct directory. If you cannot find the cause, report this as a problem.
EXH2252 The system could not find installation global parameter file: <filename>

Explanation: The DirectTalk/2 global parameter file is missing or you are running the program outside the product directory.

User Response: Run the program from the product directory or reinstall the product.

EXH2253 The global parameter file lacks optional feature parameter: <text>

Explanation: The function you are attempting to perform requires an optional feature which is not indicated in the global parameter file.

User Response: Install the missing feature and reconfigure the system.

EXH2254 The global parameter file lacks language parameter: <text>

Explanation: The DirectTalk/2 global parameter file has been damaged.

User Response: Reinstall and reconfigure the product.

EXH2255 The global parameter file lacks node name parameter: <text>

Explanation: The DirectTalk/2 global parameter file has been damaged.

User Response: Reinstall and reconfigure the product.

EXH2256 The global parameter file lacks number of lines parameter: <text>

Explanation: The DirectTalk/2 global parameter file has been damaged.

User Response: Reinstall and reconfigure the product.

EXH2257 The global parameter file lacks Portmaster card number: <text>

Explanation: The DirectTalk/2 global parameter file has been damaged.

User Response: Reinstall and reconfigure the product.

EXH2258 The number of APPC paths must be between <number> and <number>.

Explanation: You have entered an incorrect quantity for the number of APPC paths.

User Response: Enter a quantity between the numbers shown.

EXH2259 The specified starting LU number is not valid.

Explanation: You have entered an invalid starting LU number.

User Response: Enter a starting LU number that is valid based on your previous entry of other LU starting and quantity values. You can have multiple groups of LUs. All LU numbers must be unique. You must calculate the starting LU number for the second group as the starting LU for the first group plus the quantity of the first group.

Example:

- LU Group 1 - Start 1 Quantity 4
- LU Group 2 - Start 5 Quantity 2
- LU Group 3 - Start 7 Quantity 2

EXH2260 You must specify a transaction name with no imbedded blanks.

Explanation: The host APPC transaction cannot have imbedded blanks.

User Response: Correct the transaction name entry.

EXH2261 You must specify a VTAM application name with no imbedded blanks.

Explanation: The VTAM application name cannot have imbedded blanks.

User Response: Correct the application name entry.

EXH2262 You must specify a logmode name with no imbedded blanks.

Explanation: The VTAM log mode name cannot have imbedded blanks.

User Response: Correct the log mode name entry.

EXH2263 You must specify a server name with no imbedded blanks.

Explanation: The Server name cannot have imbedded blanks.

User Response: Correct the Server name entry.

EXH2264 The backup file already exists. Specify a new name or replace.

Explanation: The backup file name already exists.

User Response: Change the backup file name if you want to keep the most recent backup file. If not, select the option to overwrite it.
EXH2265  The system could not open file: filename. The errno is: number.
Explanation: The file name could not be opened. It may already be in use.
User Response: Make sure you are not running two instances of the function needing the file. If you are not, and you cannot determine what the problem is, based on the file name, report this as a problem.

EXH2266  You may not use the double quote character (" ) in a parameter.
Explanation: The double quote character cannot be used in this parameter.
User Response: Reenter the parameter without the double quote.

EXH2267  The number of paths defined: number exceeds the maximum allowed: number.
Explanation: The total number of Client or Server QUANTITY= parameters exceeds the maximum displayed in the message.
User Response: If you are manually editing a configuration file, reduce one or more QUANTITY= parameters. If the configuration is being created by DirectTalk/2 report this as a problem.

EXH2268  The mailbox server had an internal error. Write this down: text.
Explanation: This message provides some trace information that will be needed by your service representative. The user of the mailbox server will receive a return code indicating the internal error.
User Response: Investigate the cause of the error appended to the end of the message. Investigate the error received by the user of the mailbox server. If you cannot determine what the problem is, report this to your service representative.

EXH2269  The directory server had an internal error. Write this down: text.
Explanation: The directory server encountered an internal error. This message provides trace information useful to your service representative. The user of the directory server will receive a return code indicating the internal error.
User Response: Investigate the cause of the error appended to the end of the message. Investigate the error received by the user of the directory server. If you cannot determine what the problem is, report this to your service representative.

EXH2270  For server: name, session value in statement: number is not valid.
Explanation: The SESSION= parameter in the specified EMULATOR_START statement was found inappropriate for the terminal emulator being started. Specifically, it was not numeric (1-255) for VS3270MX or VS3270LU, or not alphabetic (A-Z) for VS5250EH or VS3270EH.
User Response: Correct the SESSION= parameter in the EMULATOR_START statement to be appropriate for the terminal emulator being started.

EXH2271  For server: name, session value in statement: number is a duplicate.
Explanation: The SESSION= name is not unique in this configuration file.
User Response: Ensure that no duplicate SESSION= values exist in the configuration file of the specified server.

EXH2272  For server: name, net name in statement: number is not valid.
Explanation: The override network name was longer than 16 characters.
User Response: Correct the override network name in the indicated statement in the configuration file for the indicated server.

EXH2273  Press Ctrl+Break to cancel.
Explanation: Information message: You can end the program by pressing Ctrl+Break.
User Response: No response is required.

EXH2274  The re-boot was canceled.
Explanation: Information message.
User Response: No response is required.

EXH2275  The active session was taken by another Node Manager.
Explanation: Information message: You are running a Node Manager program on a Node while another Node Manager program is accessing the same Node. This message informs you that your session was taken away.
User Response: No response is required.
EXH2276  Could not find the host subsystem or the connection is out of service.

Explanation:  This message will follow a failure message that gives the exact APPC function that failed, together with the return codes. This message describes, in more general terms, the function that failed. The most likely cause of this failure is that the host application is not available. Other causes include:
- Host terminal connection inactive or out of service.
- Host software configuration incorrect.
- Host application software configuration incorrect.
- Local communications feature configuration incorrect.

User Response:  Check the host system applications and communications equipment for availability. Check the GSI APPC host feature configuration parameters. Check the host configuration parameters. Check for recent changes in host/local hardware and software.

EXH2277  The system could not find the host program or transaction.

Explanation:  This message will follow a failure message that gives the exact APPC function that failed, together with the return codes. This message describes, in more general terms, the function that failed. The most likely cause of this failure is that the host program or transaction is not defined.

User Response:  Check the TP_NAME parameter in the GSI configuration file (default SSGSI.CFG). Check the GSI APPC host feature configuration parameters. Check the host configuration parameters. Check for recent changes in host/local hardware and software.

EXH2278  The system did not recognize the APPC return code.

Explanation:  This message will follow a failure message when the return codes are not the expected values for most normal failures. For detailed information on APPC return codes, refer to APPC Programming Reference (OS/2 library) or SNA Formats (host library).

Return code values and symptoms are many, and vary according to the system configuration. Be sure to note all return codes and other symptoms, together with the resolution of this problem. Doing this will help should the problem occur again. Below is a list of common APPC and SNA return codes:

Primary: X'0001'
  Parameter check. A host or local configuration or programming problem.

Primary: X'0003'
  Allocation error. A variety of failures which prevent the local system from establishing a session with the host.

Primary: X'0005'
  Deallocate abend. The host abended during the session.

Primary: X'000F'
  Conversation failure. Probable communications failure.

Primary: X'0010'
  Conversation failure. Probable communications failure.

Primary: X'F003'
  Communication subsystem abend. Probable configuration problem or communications failure.

Primary: X'F004'
  Communication subsystem not loaded. Probable failure of loading the subsystem onto the communications card. Check the command files that initialize the system for the execution of the communication load program.

Secondary: X'10086021'
  Transaction program name not recognized. The host does not know about the program being requested. Check the local configuration for the spelling of the TP_NAME parameter in the GSI configuration file (default SSGSI.CFG).

Secondary: X'084C0000'
  Transaction program not available. The host will not allow the program to be accessed. Check with the host system about the availability of the program.

Secondary: X'084B6031'
  Transaction program not available. The host will not allow the program to be accessed. Check with the host system about the availability of the program.

Secondary: X'0857XXXX'
  Host application inactive. The host application is currently not available. Check with the host system about the availability of the program.

Secondary: X'087DXXXX'
  Host application unknown. The requested host application is unknown. Check the local configuration. The name specified for the Host VTAM Appl may be incorrect.

Secondary: X'0801XXXX'
  Resource not available. The terminal connection for this system is out of service or inactive. Have the host active and put your terminal definition in service.
Secondary: X '0821XXXX'
Session parameters not valid. The specified logmode name is probably spelled incorrectly or else not defined at the host.

User Response: Contact your host communications service representative for assistance in correcting the communication failures. The above information will help them determine the cause and correct the failure.

EXH2279 A communications subsystem failed.
Explanation: This message follows a failure message that gives the exact APPC function that failed, together with the return codes. This message describes, in more general terms, the function that failed. The most likely cause for the local communications subsystem having failed is a failure in the communications equipment between this system and the host.

User Response: Check the host system applications and communications equipment for availability. Check the GSI APPC host feature configuration parameters. If necessary, ask for assistance from your host communications service representative.

EXH2280 Communications failed during conversation.
Explanation: This message follows a failure message that gives the exact APPC function that failed, together with the return codes. This message describes, in more general terms, the function that failed. Because communications had been established before this failure occurred, a configuration problem is unlikely to be the cause. The most likely cause is a failure in the communications equipment between this system and the host.

User Response: Check the host system applications and communications equipment for availability. If necessary, obtain assistance from your host communications service representative.

EXH2281 The host canceled the active session.
Explanation: This message follows a failure message that gives the exact APPC function that failed, together with the return codes. This message describes, in more general terms, the function that failed. Because communications had been established before this failure occurred, a configuration problem is unlikely. The host system has probably shut down.

User Response: Check the host system for availability.

EXH2283 An APPC feature in configured incorrectly.
Explanation: The APPC feature installation does not match the Node configuration file.

User Response: If you have changed a configuration file manually, correct the change. If not, reconfigure the product. If the failure still occurs, report this as a problem.

EXH2284 APPC GDS error log received for path: <number>
Explanation: A General Data Stream (GDS) error was received from the APPC host. A log of the error itself will be shown in an accompanying message EXH2286, which will help resolve the cause of the failure.

User Response: Refer to APPC host documentation for an explanation of the error log that follows.

EXH2285 Path <number> <text>
Explanation: This message displays the GDS error log received from the APPC host. (See EXH2285).

User Response: Refer to APPC host documentation for an explanation of the error log.

EXH2286 The system could not access the host subsystem or communication path.
Explanation: This message follows a failure message that gives the exact APPC function that failed, together with the return codes. This message describes, in more general terms, the function that failed. The most likely cause of this failure is that the host application is not available. Other causes include:
- Host software configuration incorrect
- Local communications feature configuration incorrect.

User Response: Check the host system applications and communications equipment for availability. Check the GSI APPC host feature configuration parameters. Check the host configuration parameters. Check for recent changes in host/local hardware and software.

EXH2287 Dumping internals of <name>
Explanation: A dump of the Node internal memory was requested. This message names the server currently being dumped.

User Response: If this dump was at the request of your service representative, send them all *.DMP files after letting the dump complete.
EXH2289 The specified adapter number is not valid.

**Explanation:** DirectTalk/2 supports real LAN adapters 0,1,2,3 and local adapter 255. Also valid are dynamic adapters 150,151,152,153 which map to 0,1,2,3 respectively.

**User Response:** Correct the parameter in error.

EXH2290 The system could not recognize data received on path: <number>

**Explanation:** The Node has received an invalid GSI header from a Client.

**User Response:** If you are using the DirectTalk/2 APIs, correct your program, otherwise report this as a problem.

EXH2294 For server: <name>, application name in statement: <number> is too long or missing.

**Explanation:** You either did not specify the application name for the APPL=<name> parameter for the TYPE=PRELOAD statement or else the application name you did specify is not 1–5 characters long.

**User Response:** Specify the correct application name.

EXH2295 For server: <name>, applications name in statement: <number> is a duplicate.

**Explanation:** You specified a duplicate application name for the APPL=<name> parameter for the TYPE=PRELOAD statement.

**User Response:** Change the application name or delete the duplicate statement.

EXH2296 For server: <name>, server name in statement: <number> is too long or missing.

**Explanation:** The name in the configuration statement is not 1 through 8 characters.

**User Response:** Correct the name. If the configuration file was produced by DirectTalk/2, report this as a problem.

EXH2297 For server: <name>, a preload error has occurred for application: <name>

**Explanation:** The application named as a preloaded module could not be loaded. The application name is incorrect or not in the Database directory.

**User Response:** Correct the application name or copy the applname.ST file into the Database directory.

EXH2298 For server: <name>, application has been preloaded: <name>

**Explanation:** Information message: The named application has been preloaded according to your configuration.

**User Response:** No response is required.

EXH2299 There is not enough disk space to write log data to: <filename>

**Explanation:** The disk is full.

**User Response:** Clear some disk space, by deleting some unwanted files, and try again.

EXH2300 The log file has been reset.

**Explanation:** Information message: Your request to reset a log file to empty completed successfully.

**User Response:** No response is required.

EXH2301 Path: <number> answering fast path is ready.

**Explanation:** Information message: This Client path number is now ready to receive requests.

**User Response:** No response is required.

EXH2303 NetBIOS is not installed or is not configured correctly

**Explanation:** You have configured support for LAN attached systems and the Operating System support for NetBIOS is not installed or configured properly.

**User Response:** Install NetBIOS on the system.

EXH2304 In same directory, cannot execute this function twice: <name>

**Explanation:** The program you are attempting to execute, named in the message, is already running. You cannot run it twice in the same directory.

**User Response:** Find the program which is already running (bringing up the task manager with Ctrl+Esc may help you to find it) and either use that instance or terminate it and start afresh.

EXH2305 Building internal matrix structure <text>

**Explanation:** Information message: A process is taking place that may take some time to complete.

**User Response:** No response is required.
EXH2306  NetBIOS resources currently available:

Explanation: Information message: This is how many NetBIOS resources are available at this instant.

User Response: No response is required.

EXH2310  NetBIOS adapter number: <text>n where n=0,1,2,3 Default is 0.

Explanation: Information message: This shows the proper format for the LAN adapter number parameter.

User Response: Enter the parameter in the proper format if the default is not the desired value.

EXH2311  Controlled shutdown pending for this program.

Explanation: Information message.

User Response: No response is required.

EXH2312  You must specify an application name.

Explanation: The name of the application has been left blank in the panel.

User Response: Type a name into the field in the panel.

EXH2313  Password not supported for this application: <name>

Explanation: Information message. The application shown in the message is not of the correct format to be password protected.

User Response: No response is required.

EXH2314  You must specify the current password.

Explanation: The Current Password field has been left blank.

User Response: Enter the current password into the field.

EXH2315  Application is not password protected.

Explanation: You tried to delete a password, but this application does not have one.

User Response: No response is required.

EXH2316  You must specify the new password.

Explanation: The New Password field has been left blank.

User Response: Enter a new password into the field.

EXH2317  You must specify the verify password.

Explanation: The Verify Password field has been left blank.

User Response: Enter the password into the field.

EXH2318  Application is already password protected.

Explanation: You tried to add a password to this application but it already has one.

User Response: No response is required.

EXH2319  The new and verify password do not match. Please reenter.

Explanation: The same password must be entered identically into each field.

User Response: Enter the password correctly.

EXH2320  Error <number> Reading password control record.

Explanation: You tried to add a password, but the password control record could not be read. This is probably an old file which does not have passwords.

User Response: Run a compress on the file, and it will add a password control record which can then be password protected.

EXH2321  Error <number> Writing password control record.

Explanation: You tried to add a password, but the password control record could not be written. This is probably an old file which does not have passwords.

User Response: Run a compress on the file, and it will add a password control record which can then be password protected.

EXH2322  The program was stopped by the Operating System

Explanation: Information message. The program was stopped by the operating system. This could be from a shutdown or pressing Ctrl-Break in the GSI session or similar cause.

User Response: No response is required.

EXH2323  This command completed successfully: <text>

Explanation: Information message. The command shown was completed successfully.

User Response: No response is required.
EXH2324 Unable to build internal file list, Call for assistance.

Explanation: The system could not execute a sub program needed to build the list.

User Response: Your system is in an invalid state. You may need to reinstall. If the error persists, contact your service representative.

EXH2325 No applications found in Database directory.

Explanation: The system tried to build a list of applications to present, but none were found.

User Response: No response is required.

EXH2326 No database files found for application: <name>

Explanation: While processing password protection, the system searched for the files for the application shown, but found none.

User Response: Check that the application name was specified correctly.

EXH2327 One or more files could not be processed.

Explanation: While adding, changing, or deleting a password for a list of files, one or more of the files could not be processed.

User Response: Check that all the files are valid for the operation.

EXH2328 Processing file: <filename>

Explanation: Information message.

User Response: No response is required.

EXH2329 The Voice Logic Module test was canceled.

Explanation: Information message. You canceled the test.

User Response: No response is required.

EXH2330 For server: <name>, host name in statement: <number> is too long or missing.

Explanation: The communications server shown detected an error when reading its configuration file; the host name in the statement shown has too long a value.

User Response: Rerun configuration. If the problem persists contact your service representative.

EXH2331 For server: <name>, emulator terminal type in statement: <number> is too long or missing.

Explanation: The communications server shown detected an error when reading its configuration file; the emulator terminal type in the statement shown has too long a value.

User Response: Rerun configuration. If the problem persists contact your service representative.

EXH2332 For server: <name>, host terminal type in statement: <number> is too long or missing.

Explanation: The communications server shown detected an error when reading its configuration file; the host terminal type in the statement shown has too long a value.

User Response: Rerun configuration. If the problem persists contact your service representative.

EXH2333 For server: <name>, could not create a semaphore

Explanation: The server shown could not create a semaphore.

User Response: Report this problem to your service representative.

EXH2334 Session Monitor: <name> launched

Explanation: Information message. The Session Monitor has successfully started the application shown.

User Response: No response is required.

EXH2335 Session Monitor: <name> launch failed (rc="no")

Explanation: The Session Monitor has failed to start the application shown. The return code shown is the OS/2 return code.

User Response: Investigate the meaning of the return code, and if necessary report this problem to your service representative.

EXH2336 Session Monitor: waiting for <name> to terminate

Explanation: Information message. The Session Monitor is waiting for the application shown to terminate.

User Response: No response is required.
EXH2337 Session Monitor: <name> terminated
Explanation: The application shown has terminated.
User Response: No response is required.

EXH2338 Session Monitor: Not enough memory for internal use
Explanation: The session monitor was unable to allocate memory for internal use.
User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH2341 FAILED Communications, Return code <number>
Explanation: The Batch Node Manager has failed communicating with the Node.
User Response: Additional messages should define the error. If not, refer to the definition for the message number which is the same as the return code.

EXH2342 FAILED, Request code=<number>, Response code=<number>
Explanation: The Batch Node Manager has communicated with the Node but the Node has failed the request.
User Response: Additional messages should define the error. If not, refer to the definition for the message number which is the same as the response code.

EXH2343 Node <name> is not defined at <name>
Explanation: The Batch Node Manager has attempted to access a Node through a local Node. The local Node does not have the remote Node defined.
User Response: Either correct the Node name, access it directly via the LAN, or correct the local Node configuration to include the remote Node.

EXH2344 Node <name> is currently busy at <name>
Explanation: The Batch Node Manager has attempted to access a Node which is currently being managed by another Batch or Interactive Node Manager.
User Response: Retry the operation. If the failure persists, either wait until the other Node Manager has finished, or terminate it.

EXH2345 Server <name> does not support <text>
Explanation: The Batch Node Manager has sent a command to a Server which does not support that command. If the Node is a lower product level, the command is not supported.
User Response: If the Node is the current level, report this error to your service representative.

EXH2346 Server <name> cannot perform <text>
Explanation: The Batch Node Manager has sent a command to a Server which cannot be performed it at the present time.
User Response: Wait and retry the operation after the Server has completed its initialization.

EXH2347 Server <name> response to <text> was too long
Explanation: The Server named in the message has produced a response which is longer than supported.
User Response: If the server named in the message is a User Server, correct it so it never responds with a length greater than the maximum specified in the request header. If not, report this as a problem.

EXH2348 Cannot perform <text>, Node <name> is stopping
Explanation: The request was not complete before the Node was stopped.
User Response: Retry the operation, if necessary, after the Node is restarted.

EXH2349 Server <name> is stopped, cannot perform <text>
Explanation: The Server named in the message is currently stopped. It therefore cannot perform any requests.
User Response: Retry the operation, if necessary, after the starting the Server.

EXH2350 Error renaming file <filename>, cannot be written
Explanation: The Node Manager does file Put and Get commands using a temporary name as the target file name. When the copy is complete, it renames the temporary name to the final target file name. (This is done to prevent having only a partial target file if a failure occurs during this operation itself). When the Node Manager attempted to replace the target file with the temporary file, an error occurred. This error occurs because the target file cannot be replaced. This is usually caused by the file being in use, or having the read only attribute.
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>User Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXH2352</td>
<td>Error code &lt;number&gt; from &lt;name&gt; is unknown to this program</td>
<td>The Node Manager received an error code it does not recognize so a proper message could not be displayed. Report this as a problem.</td>
</tr>
<tr>
<td>EXH2353</td>
<td>Internal program defect, invalid TARGET request code</td>
<td>An internal failure occurred in the Node Manager program. Report this as a problem.</td>
</tr>
<tr>
<td>EXH2354</td>
<td>Command Verb table defective for entry: &lt;name&gt;</td>
<td>An internal failure occurred in the Node Manager program. Report this as a problem.</td>
</tr>
<tr>
<td>EXH2355</td>
<td>Internal program defect, invalid SOURCE request code</td>
<td>An internal failure occurred in the Node Manager program. Report this as a problem.</td>
</tr>
<tr>
<td>EXH2356</td>
<td>&lt;name&gt; quantity active=&lt;number&gt;</td>
<td>Information message: This is the number of active resources (named in the message) that you requested. No response is required.</td>
</tr>
<tr>
<td>EXH2357</td>
<td>Node Manager command verb missing</td>
<td>You ran the Batch Node Manager with no command. The program requires a command verb input parameter.</td>
</tr>
<tr>
<td>EXH2358</td>
<td>Environment variable SET &lt;text&gt; parameter exceeds maximum length &lt;number&gt;</td>
<td>Prior to running the Batch Node Manager you SET one or more environment variables. The variable displayed in the message is too long. Issue the correct SET command and retry the operation.</td>
</tr>
<tr>
<td>EXH2359</td>
<td>Environment variable SET &lt;text&gt;=&lt;text&gt; - network name incorrect length</td>
<td>Prior to running the Batch Node Manager you SET one or more environment variables. The variable displayed in the message is too long. Issue the correct SET command and retry the operation.</td>
</tr>
<tr>
<td>EXH2360</td>
<td>Environment variable SET &lt;text&gt;=&lt;text&gt; - node name incorrect length</td>
<td>Prior to running the Batch Node Manager you SET one or more environment variables. The variable displayed in the message is too long. Issue the correct SET command and retry the operation.</td>
</tr>
<tr>
<td>EXH2361</td>
<td>Environment variable SET &lt;text&gt;=&lt;text&gt; parameter exceeds maximum length</td>
<td>Prior to running the Batch Node Manager you SET one or more environment variables. The variable displayed in the message is too long. Issue the correct SET command and retry the operation.</td>
</tr>
<tr>
<td>EXH2362</td>
<td>Command &lt;text&gt; requires 1 parameter</td>
<td>The Batch Node Manager command you are attempting to execute requires a parameter. Retry the command supplying the required parameter.</td>
</tr>
<tr>
<td>EXH2363</td>
<td>Command &lt;text&gt; cannot have parameters</td>
<td>The Batch Node Manager command you are attempting to execute has no additional parameters. Retry the command supplying only the command itself.</td>
</tr>
</tbody>
</table>
EXH2364 Command <text> requires <number> parameters

Explanation: The Batch Node Manager command you are attempting to execute requires additional parameters.

User Response: Retry the command supplying the number of required parameters shown.

EXH2365 Command <text> requires at least 1 parameter

Explanation: The Batch Node Manager command you are attempting to execute requires at least one parameter.

User Response: Retry the command supplying the required parameter(s).

EXH2366 Command <text> requires at least <number> parameters

Explanation: The Batch Node Manager command you are attempting to execute requires at least the number of parameters shown.

User Response: Retry the command supplying the required parameters.

EXH2367 Command <text> cannot have more than 1 parameter

Explanation: The Batch Node Manager command you are attempting to execute can have only one parameter other than the command.

User Response: Retry the command supplying the command and not more than one parameter.

EXH2368 Command <text> cannot have more than <number> parameters

Explanation: The Batch Node Manager command you are attempting to execute can have only the number of parameters shown other than the command.

User Response: Retry the command supplying the command, and not more than the number of parameters shown.

EXH2369 Node Manager command verb <text> not recognized

Explanation: The Batch Node Manager command you are attempting to execute is not valid.

User Response: Retry the operation supplying a correct command.

EXH2370 The following command parameter is incorrect: <text>

Explanation: The Batch Node Manager command you are attempting to execute does not recognize the syntax or content displayed in the message.

User Response: Retry the operation supplying a correct parameter.

EXH2371 Trace event number parameter <text> is invalid

Explanation: You are attempting to start a trace. Only events 1 through 9 are valid.

User Response: Retry the operation supplying a correct parameter.

EXH2372 Trace path number <number> is invalid

Explanation: You are attempting to start a trace on a path not in the Node configuration.

User Response: Retry the operation supplying a valid path number. If you do not know the path numbers, use the Interactive Node Manager and display the Node Client and Server Path lists to determine the number of the path you want to trace.

EXH2373 <name> Get file <filename>

Explanation: Information message: The named Node Manager Operator did a Get file operation from this Node.

User Response: No response is required.

EXH2374 <name> Put file <filename>

Explanation: Information message: The named Node Manager Operator did a Put file operation to this Node.

User Response: No response is required.

EXH2375 <text> Restarted, previous file incomplete

Explanation: Information message: The current Node Manager file operation has been restarted due to a failure of the previous file operation.

User Response: No response is required.

EXH2376 The file <filename> already exists, use replace

Explanation: You are attempting the Put or Get file operation to a target file which already exists.

User Response: If you have specified the correct target file name, either erase it or use the Replace forms of Put and Get to force the replacement of the target file.
EXH2377  Source file <filename> has a bad path or file name
Explanation: The source file name in a Get or Put file operation is not a valid name using the DOS file naming rules.
User Response: Reissue the command with a valid name.

EXH2378  Destination file <filename> has a bad path or file name
Explanation: The target file name in a Get or Put file operation is not a valid name using the DOS file naming rules.
User Response: Reissue the command with a valid name.

EXH2379  <text> failed opening file <filename>
Explanation: The Get or Put file operation failed because the named file could not be opened. This is because the source file is in use or does not exist.
User Response: Reissue the command with a correct source file or terminate the program which is currently accessing it.

EXH2380  Server <name> could not complete command <text>
Explanation: The Operating System command you are running did not complete. This is usually caused by attempting to execute an interactive command. The Node Manager supports only OS commands that have one input and one output.
User Response: Do not attempt to execute an interactive command. If the OS command requires additional input after being started, put the responses in a file and redirect as input to the command.

EXH2381  Destination disk has insufficient space for file <filename>
Explanation: The Node Manager Get or Put file operation cannot complete because the target disk does not have enough space to contain the file.
User Response: Erase some files on the target disk to free up some space. You may use the Node Manager Operating System command support to do the erase command.

EXH2382  <name> has insufficient memory to perform function
Explanation: The system does not have enough memory to complete the operation requested by the named program.
User Response: Terminate some other applications to free up some memory and retry the failing operation.

EXH2383  <name> cannot perform any more concurrent file operations
Explanation: A Node cannot perform more than 3 file operations at the same time, as requested by the named program.
User Response: Retry the operation later when other Node Managers are not doing file operations.

EXH2384  Resource name <name> is invalid
Explanation: The command you are attempting to run against a resource has an invalid resource name.
User Response: Retry the command with a valid resource name.

EXH2385  This program is out of sequence with <name>
Explanation: The Node Manager is out of sequence with the named Node. (Both the Node Manager and the Node maintain a sequence number to ensure there are no missing or out of sequence exchanges). This error is caused by an undetected communications data corruption or another Node Manager using the same Operator name as you, doing the same command as you.
User Response: Retry the failing command. If the error persists, report this problem to your service representative.

EXH2386  File size <number> - Received <number>
Explanation: Information message: The file operation is proceeding and the amount of data received is shown.
User Response: No response is required.

EXH2387  Error writing to file <filename>
Explanation: The Node Manager had an error writing to the temporary file created to do the file copy. This would occur if the disk space was used by another file during the copy.
User Response: Erase some files on the target disk to free up some space. You may use the Node Manager Operating System command support to do the erase command.
EXH2390  Data contained in file `<filename>`

**Explanation:** When a rename error occurs as part of a Node Manager Get or Put file operation, the data has been successfully copied into a temporary file. The name of the temporary file containing the data on the target system is displayed in this message.

**User Response:** If you wish to use the temporary file, you may rename or copy it later to the desired file.

EXH2391  Error opening work file `<filename>`

**Explanation:** The temporary work file used by the Node Manager Get and Put file operations could not be opened. This error would occur when another Node Manager is doing a file operation at the same time as you.

**User Response:** Retry the file operation later.

EXH2392  Disk `<name>` does not have `<number>` space remaining

**Explanation:** The named target disk for a Node Manager Get or Put file operation does not have enough space to contain the target file. The disk must have enough space to contain the file twice, once for the temporary work file created to do the copy.

**User Response:** Erase some files on the target disk to free up some space. You may use the Node Manager Operating System command support to do the erase command.

EXH2393  Path or File name invalid, file `<filename>`

**Explanation:** The file name displayed in the message is not a valid name using the DOS file naming rules.

**User Response:** Retry the operation with a valid path and file name.

EXH2394  File size `<number>` - Sent `<number>`

**Explanation:** Information message: The file operation is proceeding and the amount of data sent is shown.

**User Response:** No response is required.

EXH2395  Drive `<name>` is not a valid destination

**Explanation:** The disk name displayed in the message is not a valid name using the DOS file naming rules.

**User Response:** Retry the operation with a valid disk name.

EXH2396  Node Manager name `<name>` is already in use

**Explanation:** This Node Manager Operator name is already being used to manage the Node.

**User Response:** Change your Node Manager Operator name or wait until the other Node Manager is done.

EXH2397  System has no logs

**Explanation:** You have requested the display of all Node System Log Files. The Node being managed does not have any System Log Files.

**User Response:** No response is required.

EXH2400  Data length exceeds the size of the data base file record.

**Explanation:** The record length in the load input file is longer than the defined record length of the Database file.

**User Response:** Correct the input file or delete and re-create the Database file with the correct record length.

EXH2401  Records read: `<number>` written: `<number>`, some records truncated.

**Explanation:** The length of one or more records in the load input file is longer than the defined record length of the Database file.

**User Response:** If the input file is correct, delete and re-create the Database file with the correct record length. Then retry the load.

EXH2402  Record not loaded. Data offset exceeds length. Key: `<name>`

**Explanation:** The offset value exceeds the data length of a record in the load input file.

**User Response:** Correct the input file record for the key displayed and retry the load operation.

EXH2403  Source and Destination Files are not compatible.

**Explanation:** You are attempting to merge files that do not contain the same data type.

**User Response:** Correct the input file contents or the name(s) entered.

EXH2404  Merge complete.

**Explanation:** Information message.

**User Response:** No response is required.
EXH2405 Enter required data and press a function key.
Explanation: You have failed to put in a required entry.
User Response: Enter the requested data where the cursor is located.

EXH2406 A copy of this program is already running in this directory!
Explanation: You are prevented from running the DirectTalk/2 major program functions twice in the same directory.
User Response: Find the OS/2 session where the program you are attempting to start is already running.

EXH2407 Expiry date passed: <text> scheduled for termination
Explanation: DirectTalk/2 provides sample products which have an expiration date. The product shown has expired and will not run again.
User Response: Obtain and install the original licensed product.

EXH2408 Global <filename> configuration file missing, code may have expired
Explanation: The configuration file named in the message is missing. DirectTalk/2 provides sample products which have an expiration date. The named file will have been deleted if the product you are using has expired.
User Response: Obtain and install the original licensed product, or reinstall the one you have if the expiry date has not passed and the file has been accidentally erased.

EXH2409 Node <name> is suspended, try later
Explanation: The Node you are attempting to manage is suspended.
User Response: Try the operation later after the Node has come out of suspension or use the Node Manager to change the time and date the Node is to end suspension.

EXH2410 Node <name> requires password
Explanation: The Node you are managing requires a password for all operations.
User Response: Enter the password.

EXH2411 Contacting node in network
Explanation: Information message: The Node Manager is attempting to connect to a LAN attached Node.
User Response: No response is required.

EXH2412 The number of Requester paths defined: <number> exceeds maximum: <number>
Explanation: The Node configuration file has more Requester (Client) paths than the number shown in the message.
User Response: Reduce the QUANTITY= parameters for one or more Requester paths groups.

EXH2413 The number of Server paths defined: <number> exceeds maximum: <number>
Explanation: The Node configuration file has more Server paths than the number shown in the message.
User Response: Reduce the QUANTITY= parameters for one or more Server paths groups.
Node Password Protection
Messages (2500-2699)

EXH2500 Node Passwords Corrupted - Re-Install Product
Explanation: The Node passwords have been damaged.
User Response: You must reinstall the product to remove the Node passwords. Then use the Interactive Node Manager to add the desired passwords to the Node.

EXH2501 Node does not support passwords
Explanation: You are attempting to change passwords on a Node that does not support passwords.
User Response: Stop trying to use passwords on this Node, or upgrade the level of the Node.

EXH2502 Write password changed
Explanation: Information message: The write password has been changed successfully.
User Response: No response is required.

EXH2503 Read password changed
Explanation: Information message: The read password has been changed successfully.
User Response: No response is required.

EXH2504 Write password added
Explanation: Information message: The write password has been added successfully.
User Response: No response is required.

EXH2505 Read password added
Explanation: Information message: The read password has been added successfully.
User Response: No response is required.

EXH2506 Write password deleted
Explanation: Information message: The write password has been deleted successfully.
User Response: No response is required.

EXH2507 Read password deleted
Explanation: Information message: The read password has been deleted successfully.
User Response: No response is required.

EXH2508 Current password not equal
Explanation: The current Node password you entered does not match the Node password.
User Response: Enter the Node password correctly.

EXH2509 New/Verify password different
Explanation: The second time you entered the password for verification, does not match the first entry.
User Response: Type in the desired password in both places again.

EXH2510 Cannot delete password
Explanation: You have requested to delete a password the Node does not have.
User Response: If you wish for the Node to not have the password, do nothing. If not, correct your request type.

EXH2511 Cannot add password
Explanation: You have requested to add a password the Node already has.
User Response: If you wish for the Node to have the password, change it. If not, correct your request type.

EXH2512 Cannot change password
Explanation: You have requested to change a password the Node does not have.
User Response: If you wish for the Node to have the password, add it. If not, correct your request type.

EXH2513 Invalid password type
Explanation: Password change operations must be Read, Write or Both.
User Response: Enter R, W or B.

EXH2514 No imbedded blanks allowed
Explanation: A password was entered with an imbedded blank.
User Response: Enter a proper password.
EXH2515 Invalid password character
Explanation: A password was entered with an invalid special character.
User Response: Enter a proper password.

EXH2516 Password too short
Explanation: The password you entered does not contain the minimum number of characters.
User Response: Enter a proper password.

EXH2517 Maximum tries exceeded
Explanation: You have exceeded the maximum number of password violations.
User Response: No response is required.

EXH2518 Password Violation
Explanation: The operation you are attempting requires a password and your password does not match the Node access password. A password violation has been logged at the Node.
User Response: Enter a correct password or stop trying the operation.

EXH2519 Password required
Explanation: The operation you are attempting requires a password.
User Response: Enter the password.

EXH2520 Operator canceled request
Explanation: Information message: The request you originally made was not performed.
User Response: No response is required.

EXH2521 Read and Write password deleted
Explanation: Information message: The read and write passwords have been deleted successfully.
User Response: No response is required.

EXH2526 Cannot match write password
Explanation: A read password cannot be the same as the write password.
User Response: Enter a different password.

EXH2527 Cannot match read password
Explanation: A write password cannot be the same as the read password.
User Response: Enter a different password.

EXH2528 Node not responding, Please wait...
Explanation: The Node Manager is attempting to connect to a LAN attached Node. This can take several seconds if the Node is responding.
User Response: Wait for the retries to complete. If a connection is never made, you should get another message which defines the error occurring.

EXH2529 File not minimum size <number>
Explanation: The file size you entered during system configuration is not the minimum size required.
User Response: Enter a number at least as large as that shown in the message.

EXH2530 Duplicate name
Explanation: The name you entered during system configuration is a duplicate of a name already entered.
User Response: Change the name to be unique.

EXH2531 Write password required
Explanation: You are attempting an operation which requires at least a write authority password.
User Response: Enter the write password.

EXH2532 Read password required
Explanation: You are attempting an operation which requires at least a read authority password.
User Response: Enter the read or write password.

EXH2533 Password required
Explanation: You are attempting an operation which requires a password.
User Response: Enter the password.

EXH2534 Incorrect - write password required
Explanation: You are attempting an operation which requires at least a write authority password.
User Response: Enter the write password.

EXH2535 Incorrect - read password required
Explanation: You are attempting an operation which requires at least a read authority password.
User Response: Enter the read or write password.
<table>
<thead>
<tr>
<th>EXH2536 Incorrect - password required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> You are attempting an operation which requires a password.</td>
</tr>
<tr>
<td><strong>User Response:</strong> Enter the password.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH2537 New password required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> You are being prompted to add a new password.</td>
</tr>
<tr>
<td><strong>User Response:</strong> Enter the new password twice for verification.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH2538 Current password required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> You are attempting an operation which requires a password.</td>
</tr>
<tr>
<td><strong>User Response:</strong> Enter the password.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH2539 Verify password required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong> You are attempting to change a password which requires the password entered twice for verification.</td>
</tr>
<tr>
<td><strong>User Response:</strong> Enter the password the second time.</td>
</tr>
</tbody>
</table>
EXH2700 Request to suspend node made by: <name>

Explanation: Information message: The Node Manager operator named in the message has suspended the Node.

User Response: No response is required.

EXH2701 Suspend pending at time shown

Explanation: Information message: You have requested to suspend a Node which already has a pending suspend time.

User Response: If the pending suspend is not the desired time and date, change it.

EXH2702 Suspending node. Please wait...

Explanation: Information message: The Node is still performing the suspend.

User Response: Wait before attempting to access the Node again. It may take several minutes to shutdown a Node and suspend it.

EXH2703 Suspending node

Explanation: Information message: Confirming your request to suspend the Node.

User Response: Wait before attempting to access the Node again. It may take several minutes to shutdown a Node and suspend it.

EXH2704 Restarting node. Please wait...

Explanation: Information message: The Node is still performing the restart.

User Response: Wait before attempting to access the Node again. It may take several minutes to shutdown a Node and restart it.

EXH2705 Restarting node

Explanation: Information message: Confirming your request to restart the Node.

User Response: Wait before attempting to access the Node again. It may take several minutes to shutdown a Node and restart it.

EXH2706 Node restarted by: <name>

Explanation: Information message: The Node Manager operator named in the message has requested the Node restart.

User Response: No response is required.

EXH2707 Node restart time changed by: <name>

Explanation: Information message: The Node was scheduled to restart at a future time. The restart time has been changed by the Node Manager operator named in the message.

User Response: No response is required.

EXH2708 Wrap log file <filename> corrupted or changed size,

Explanation: The log file named in the message is damaged or you have reconfigured and changed its size.

User Response: Follow the actions for message EXH2709.

EXH2709 Save contents if necessary and delete file.

Explanation: This message accompanies EXH2708. The Node must reformat the log file and cannot do it until it is erased.

User Response: If you want to keep the log file contents, rename it; otherwise, erase it.

EXH2710 Currently at left of window

Explanation: You attempted to scroll left and you are already at the far left end of the displayed data.

User Response: No response is required.

EXH2711 Currently at right of window

Explanation: You attempted to scroll right and you are already at the far right end of the displayed data.

User Response: No response is required.

EXH2712 Transfer control to <name> start routine

Explanation: Information message: The Node has given control to the named Server start() routine. The Server will start and return control.

User Response: No response is required.
EXH2713  Return from start routine rc=<number>

Explanation: The Server has returned from its start() routine with the return code (rc) shown. If it is zero, this is not an error.

User Response: If the return code is not zero additional error messages will identify the problem.

EXH2714  Transfer control to <name> 16 bit init routine

Explanation: Information message: The Node has given control to the named Server init() routine. The Server will do its initialization and return control.

User Response: No response is required.

EXH2715  Return from init routine rc=<number>

Explanation: The Server has returned from its init() routine with the return code (rc) shown. If it is zero, this is not an error.

User Response: If the return code is not zero additional error messages will identify the problem.

EXH2716  Transfer control to <name> term routine

Explanation: The Node has given control to the named Server term() routine. The Server will do its termination and return control.

User Response: No response is required.

EXH2717  Return from term routine rc=<number>

Explanation: The Server has returned from its term() routine with the return code (rc) shown.

User Response: No response is required.

EXH2718  Transfer control to <name> 32 bit init routine

Explanation: The Node has given control to the named Server init() routine. The Server will do its initialization and return control.

User Response: No response is required.
Configuration Parser Messages (2900-2999)

EXH2900 The configuration file could not be opened.
Explanation: The file name or the path may be incorrect or the file may not exist.
User Response: The previous message will tell you the file name. Check the path and name. If the file does not exist then it may be necessary to reinstall or reconfigure part of the product.

EXH2901 A file read error occurred. The configuration file may be corrupt.
Explanation: The file has been damaged in some way. The file may be corrupt on your hard disk or an encoded file has been modified.
User Response: The previous message will tell you the file name. If you suspect that the hard disk is at fault then run CHKDSK to determine any disk errors. If the file was delivered with the product you may have to delete the file and reinstall part of the product. If the file is created by configuration then delete the file and rerun the configuration program.

EXH2902 Missing double quotes. A matching pair of double quotes was not found.
Explanation: Strings in configuration files must be defined within double quotes on one line. Either the beginning quotes or ending quotes are missing.
User Response: The previous message will tell you the file name. Edit this file and insert the missing double quotes, or rerun the configuration program.

EXH2903 The requested statement, <text> could not be found.
Explanation: The previous message will tell you the file name.
User Response: Rerun the configuration program to correct the problem.

EXH2904 The requested parameter, <text> could not be found.
Explanation: The previous message will tell you the file name.
User Response: Rerun the configuration program to correct the problem.

EXH2905 Missing semicolon. A semicolon is required to terminate each statement.
Explanation: Each statement is defined by a starting keyword and ends in a semicolon. The previous message will detail the area of the configuration file that is suspected to be missing a semicolon.
User Response: Either edit the file and insert a semicolon before the next keyword (nearly always ‘TYPE=’) or rerun the configuration program.

EXH2906 The required keyword <text> was not found before a semicolon.
Explanation: Each statement is defined by a starting keyword and ends in a semicolon. The previous message will detail the area of the configuration file that is suspected to be missing the starting keyword.
User Response: Check the file and insert the keyword as necessary or rerun the configuration program.

EXH2907 A string supplied for enumeration was NULL or non-numeric.
Explanation: One of the internal parser routines was supplied with an incorrect argument.
User Response: The previous message will tell you the file name. Either edit the file and ensure that the value is numeric or rerun the configuration program.

EXH2908 A string supplied as a range was not of the correct form.
Explanation: A range must be of the form (n) or (n TO m) where n and m are numbers.
User Response: The previous message will tell you the file name. Check the file and correct the range or rerun the configuration program.

EXH2909 An internal malloc() failure occurred.
Explanation: OS/2 was unable to allocate any more memory to the current program.
User Response: Check that you have enough system resources available before running the program (real memory and swap-file). Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2910 An internal statement creation failure occurred.
Explanation: Data structures within the configuration program may have been damaged.
User Response: Configuration will be incomplete, so you will need to rerun the configuration program.
EXH2911  CFG_Open() was unable to allocate a work area.
Explanation:  OS/2 was unable to allocate enough memory required to start the configuration parser.
User Response:  Check that you have enough system resources available before running the program (real memory and swap-file). Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2912  CFG_Close() was supplied with a NULL or invalid work area.
Explanation:  There was an abnormal end to the configuration parser session.
User Response:  Configuration may be incomplete and files may be left open. The configuration program needs to be stopped and restarted.

EXH2913  The supplied work area pointer was NULL or invalid.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2914  Right parenthesis expected instead of a left parenthesis.
Explanation:  There was an incorrect parenthesis in the file. A matching pair was expected.
User Response:  The previous message will tell you the file name. Either edit the file and correct the error or rerun the configuration program.

EXH2915  Left parenthesis expected instead of a right parenthesis.
Explanation:  There was an incorrect parenthesis in the file. A matching pair was expected.
User Response:  The previous message will tell you the file name. Either edit the file and correct the error or rerun the configuration program.

EXH2916  Missing parenthesis. A right parenthesis was expected before end of line.
Explanation:  The ending parenthesis was not found. Values within parentheses cannot span more than one line.
User Response:  The previous message will tell you the file name. Either edit the file and correct the error or rerun the configuration program.

EXH2917  A NULL pointer was supplied as a return structure.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2918  The supplied file name was NULL or of zero length.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2919  The requested mode was incorrect.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2920  The supplied statement to be found was NULL or of zero length.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2921  The value of the string supplied was too low for enumeration.
Explanation:  An attempt to evaluate the string would have caused a numeric underflow.
User Response:  The previous statement will tell you the file name. Either edit the file to correct the problem or rerun the configuration program.

EXH2922  The value of the string supplied was too high for enumeration.
Explanation:  An attempt to evaluate the string would have caused a numeric overflow.
User Response:  The previous statement will tell you the file name. Either edit the file or rerun the configuration program.

EXH2923  The supplied range was NULL or of zero length.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.
EXH2924  The supplied trace string was NULL or of zero length.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2925  A string supplied as a trace was not of the correct form.
Explanation:  Trace strings should be of the form: 123456789 or T1T2T3T4T5T6T7T8T9. The presence or absence of any number will turn the trace on or off respectively. Placing a 'T' before the number will cause the trace to be logged with a time-stamp as well.
User Response:  The previous message will tell you the file name. Edit this file and correct the trace statement.

EXH2926  A signed string value was supplied for unsigned enumeration.
Explanation:  An attempt to evaluate a signed string to produce an unsigned integer would have caused an error.
User Response:  The previous message will tell you the file name. Either edit this file and remove the sign from the number, or rerun the configuration program.

EXH2927  The supplied sub_statement keyword was NULL or of zero length.
Explanation:  An internal call to the configuration parser failed.
User Response:  Configuration will be incomplete, so you will need to rerun the configuration program.

EXH2928  Missing sub-statement end keyword.
Explanation:  Sub-statements must have an end keyword before the end of the statement. The default end keyword is a colon.
User Response:  The previous message will tell you the file name. Either edit this file and insert the end keyword, or rerun the configuration program.

EXH2929  The sub-statement start keyword was not found before the end keyword.
Explanation:  A request to find a sub-statement found the end keyword before the start keyword. The start keyword is missing.
User Response:  The previous message will tell you the file name. Either edit this file and insert the start keyword, or rerun the configuration program.

EXH2930  The requested sub-statement, <text> could not be found.
Explanation:  The parser could not find the sub-statement within the current statement.
User Response:  The previous message will tell you the file name. Rerun the configuration program to correct the problem.

EXH2931  Error while processing config file <filename> at line <number>. See next message.
Explanation:  Information for the next message.
User Response:  None.

EXH2932  Warning while processing config file <filename> at line <number>. See next message.
Explanation:  Information for the next message.
User Response:  None.

EXH2933  Error while processing config file <filename> on, or before line <number>. See next message.
Explanation:  Information for the next message.
User Response:  None.

EXH2934  Warning while processing config file <filename> on, or before line <number>. See next message.
Explanation:  Information for the next message.
User Response:  None.

EXH2935  Error while attempting to use a configuration file. See next message.
Explanation:  Information for the next message.

EXH2936  Error while processing config file <filename> in statement starting at line <number>. See next message.
Explanation:  Information for the next message.
User Response:  None.

EXH2937  Warning while processing config file <filename> in statement starting at line <number>. See next message.
Explanation:  Information for the next message.
User Response:  None.
EXH2938 Unknown return code RC=<number> passed to CFG_Error().

Explanation: The parser error handler was passed an error number that it does not know how to handle.

User Response: Configuration may be incomplete, so you will need to rerun the configuration program.
Application Manager and Executor Messages (3000-3299)

EXH3001 The system detected an error in Telephony Server: <name>
Explanation: An error occurred in the Telephony Server.
User Response: Report this problem to your service representative.

EXH3002 The system could not find the Voice Logic Module to perform Play_Module.
Explanation: You specified a voice logic module in the Play_Module that the system could not find.
User Response: The name can be up to 15 characters in length. You must create the voice logic module prior to running the Play_Module action in your application. You can specify the name as a literal or variable. If you specify the name as a literal, you must enclose the name in single quotes. Type the name of the voice logic module to run for the Play_Module action.
Also ensure the voice logic module exists for the language you are currently using.

EXH3004 A Telephony Server error caused the voice program to end.
Explanation: The voice program ended because of a Telephony Server error.
User Response: The messages that preceded this message indicate the cause of the Telephony Server error.

EXH3005 Log_a_Message could not find user message file: <filename>
Explanation: The file named in the message could not be found by the Log_a_Message action.
User Response: Ensure the file exists in the voice system main directory. If it does not exist build the file containing the message ID specified in the action as well as message text for that message ID.

EXH3006 You must specify a phone number to perform Place_a_Call.
Explanation: You did not specify a telephone number for the Phone Number parameter for the Place_a_Call action.
User Response: Specify a telephone number for the Phone Number parameter.

EXH3007 The system could not find the phone number to perform Place_a_Call.
Explanation: You did not specify a telephone number for the Phone Number parameter for the Place_a_Call action.
User Response: Specify a variable or a literal value for the telephone number. If you specify a literal, you must enclose it in quotes. Ensure that if you specified a variable it has been set to some value.

EXH3008 You must specify the DTMF tone string to perform Put_Tone_String.
Explanation: You did not specify a string for the Tone string parameter for the Put_Tone_String action.
User Response: Specify a string for the Tone string parameter.

EXH3009 The system could not find the DTMF tone string to perform Put_Tone_String.
Explanation: You did not specify a string for the Tone string parameter or the variable you specified as the value for the parameter does not exist.
User Response: Specify a string for the Tone string parameter or specify an existing variable.

EXH3010 You must specify an application name to perform Link_to_Appl.
Explanation: You did not specify the name of the application that the Link_to_Appl action is to link to.
User Response: Specify the name of the application that the Link_to_Appl action is to link to.

EXH3011 Application names must be 1 to 5 characters long to perform Link_to_Appl.
Explanation: You did not specify the name of the application that the Link_to_Appl action is to link to or the name you specified is longer than 5 characters.
User Response: Specify the name of the application that the Link_to_Appl action is to link to. The name of the application can be up to 5 characters in length.

EXH3012 The system could not find the application name to perform Link_to_Appl.
Explanation: You specified the name of the application that the Link_to_Appl action is to link to in a variable that does not exist, or the application itself does not exist.
User Response: Check that the application exists, and specify its correct name in an existing variable, or create a variable to contain the correct name.
EXH3013  The system could not load this application to perform Link_to_Appl: <name>
Explanation:  You specified the name of an application that does not exist or a system error has occurred.
User Response:  Specify the correct name of the application or see your system administrator.

EXH3014  The initial step number specified to perform Link_to_Appl is not valid.
Explanation:  You specified an initial step that does not exist.
User Response:  Specify the correct step number in the Link_to_Appl action.

EXH3015  The system could not find the initial step number to perform Link_to_Appl.
Explanation:  You specified the initial step number in a variable that does not exist.
User Response:  Specify the initial step number in an existing variable or create the variable to contain the initial step number.

EXH3016  You must specify the variable to be created.
Explanation:  You did not specify the name of the variable to create.
User Response:  Specify the name of the variable to create in the Variable parameter for the Create_Variable action.

EXH3017  You must specify the variable to be deleted.
Explanation:  You did not specify the name of the variable to delete.
User Response:  Specify the name of the variable to delete in the Variable parameter for the Delete_Variable action.

EXH3020  The system could not find the required Application Control File.
Explanation:  You specified a file name that does not exist or that the system cannot access in the Voice System main directory.
User Response:  Make sure that the start-up file does exist and that the file is in the Voice System main directory.

EXH3021  You must specify an application name in the Application Control File.
Explanation:  You did not specify the application name for the initial_appl variable in the application control file.
User Response:  Specify the application name for the initial_appl in the application control file.

EXH3022  Application names may not be longer than 5 characters.
Explanation:  You specified the application name longer than 5 characters.
User Response:  Specify the application name for the initial_appl variable in the application control file. The name can be up to 5 characters in length.

EXH3023  You must specify a voice line in the Application Control File.
Explanation:  You did not specify a value for the voice_line variable in the application control file.
User Response:  Specify the value for the voice_line variable in the application control file.

EXH3024  You must specify a Telephony Server in the Application Control File.
Explanation:  You did not specify the network name of the Telephony Server for the voice_server variable in the application control file.
User Response:  Specify the network name of the Telephony Server for the voice_server variable in the application control file.

EXH3025  The system could not open a session with Telephony Server: <name>
Explanation:  An error occurred when the system tried to open a session with the Telephony Server identified in the message.
User Response:  Check that you have specified the correct Telephony Server name in the voice_server variable in your control file. Ensure that you have used the correct case when specifying the voice_server variable.

EXH3026  You must specify a voice program server in the Application Control File.
Explanation:  You did not specify a value for the state_server variable in the application control file.
User Response:  Specify a value for the state_server variable in the application control file.
EXH3027 The system could not open a session with voice program server: <name>

Explanation: An error occurred with the voice program server when the system tried to open a session.

User Response: Check that you have specified the correct voice program server name in your control file. Ensure that you have used the correct case when specifying the state_server variable.

EXH3028 The system could not load application: <name>

Explanation: An error occurred while the system was loading the application.

User Response: See your system administrator.

EXH3029 The Application Manager stopped because the application ended.

Explanation: The application has ended and the Application Manager is ending.

User Response: None.

EXH3030 The system could not identify which Voice Logic Module to repeat.

Explanation: An action requested that the last Play_Module be repeated, but none had been run, so there is no module to repeat.

User Response: Check the logic of the voice program.

EXH3031 The system cannot find the specified step to repeat the last Play_Module.

Explanation: A request to repeat the last Play_Module was processed, but the step referred to was not found in the current application. This may be an internal processing error.

User Response: Check the program for errors, if there are none report this problem to your service representative.

EXH3032 The system cannot find this step specified in the voice program: <name>

Explanation: A step was specified in the voice program but the system cannot find the step to perform. This is an internal processing error.

User Response: Report this problem to your service representative.

EXH3033 The primary voice program ended and the Application Manager stopped.

Explanation: Information message: A topmost or controlling voice program ended and the Application Manager therefore shut down.

User Response: None.

EXH3034 The voice program stopped due to an error in application: <name>

Explanation: An action returned an internal error code indicating a serious error. The name of the application and the step where the error occurred are given in the message. This error caused the voice program to end.

User Response: Review the preceding messages in the session log to determine the cause.

EXH3035 The system detected a return code other than 0-15 in application: <name>

Explanation: A return code outside the normal range was returned by a user-written action. Since the system does not recognize the return code, it cannot continue processing.

The name of the application and the step where the error occurred are given in the message.

User Response: Check the documentation for the specified application to find the meaning of the return code. Check the source code of the application for the cause of the error.

EXH3036 You must specify a variable to perform Set_Variable.

Explanation: You attempted to define a variable without giving a name by which it is to be identified.

User Response: Specify the name of the variable.

EXH3037 You must specify a Voice Logic Module name for Play_Module.

Explanation: You attempted to perform Play_Module without giving a name of the module to be played.

User Response: Specify the name of the voice logic module.

EXH3038 This Voice Logic Module name is not valid: <name>

Explanation: You specified a voice logic module name that is not in the range of 1-16 characters. The name you specified is given in the message.

User Response: Specify a correct name for the voice logic module.
EXH3039  The system could not find the Voice Logic Module name for Play_Module.

Explanation:  The variable you specified to contain the name of the voice logic module does not exist on the system.  The program does not know which voice logic module to play.

User Response:  Specify a correct name for the variable.

EXH3040  The system could not read Voice Logic Module: <name>

Explanation:  An error occurred reading the specified voice logic module.  The name of the module is given in the message.

User Response:  Review the other messages in the session log to determine the cause.

EXH3041  There is a voice logic operation that is not valid in module: <name>

Explanation:  An operation code that is not valid was found in the voice logic module.  The name of the module is given in the message.

User Response:  Correct the voice logic module.

EXH3042  The system could not find the specified value to play Voice Logic Module: <name>

Explanation:  A variable was specified in the voice logic module but it does not exist on the system.

User Response:  Check that all specified variables exist.

EXH3043  There is a play type that is not valid in Voice Logic Module: <name>

Explanation:  A play operation that is not valid was found in the voice logic module that is named in the message.

User Response:  Check that all play operations are correct.

EXH3044  Could not find a value for "if" operand 1 in Voice Logic Module: <name>

Explanation:  A required argument was missing from an IF statement in the voice logic module that is named in the message.

User Response:  Check that all arguments are specified.

EXH3045  Could not find a value for "if" operand 2 in Voice Logic Module: <name>

Explanation:  A required argument was missing from an IF statement in the voice logic module that is named in the message.

User Response:  Check that all arguments are specified.

EXH3046  You may not have more than 128 segments in a Voice Logic Module.

Explanation:  There is a system limit of 128 on the number of voice segments that can be processed in one voice logic module, and you have exceeded that limit.  Note that voice logic module operations such as playing a number or date can cause multiple segments to be played.

User Response:  Break the voice logic module into several smaller ones.

EXH3047  The number to be played is too long in Voice Logic Module: <name> The limit is 12 digits.

Explanation:  There is a system limit of 12 on the number of digits in one number that can be played.  You have exceeded that limit.

User Response:  Check that the number to be played is correct.

EXH3048  The system could not find voice program: <name>

Explanation:  You specified the name of a voice program that does not exist on the system.

User Response:  Check that the program exists or correct the name.  The voice program should exist in the Voice System data directory specified during configuration.

EXH3049  The system could not read voice program: <name>

Explanation:  An error occurred loading the voice program that is named in the message.

User Response:  Check the preceding messages to determine the cause.
EXH3050 You must specify a Voice Logic Module server for application: <name>

**Explanation:** The variable "voice_logic_srvr" which specifies the network name of the voice logic module server was not specified in the start-up file (Application Control File).

The name of the application for which the variable was not specified is given in the message.

**User Response:** Specify the required variable in the Application Control File.

EXH3051 You must specify a voice segment server for application: <name>

**Explanation:** The variable "voice_segmt_srvr" which specifies the network name of the voice segment server was not specified in the start-up file (Application Control File).

The name of the application for which the variable was not specified is given in the message.

**User Response:** Specify the required variable in the Application Control File.

EXH3052 The system could not open a session with Voice Logic Module: <name>

**Explanation:** An error occurred accessing the voice logic module server that is named in the message.

**User Response:** Check the preceding messages to determine the cause.

EXH3053 The control file name was not given. This is an internal error.

**Explanation:** The name of the control file to be processed was not passed to the routine named "vmsmsstp". This is an internal processing error.

**User Response:** Report this problem to your service representative.

EXH3054 The system could not open control file: <filename>

**Explanation:** An error occurred trying to open the control file that is named in the message.

**User Response:** Check that the file exists and is in the Voice System main directory.

EXH3055 You must specify a valid control file name.

**Explanation:** The variable for the control file that should have been in the control file statement was not present or was too long.

**User Response:** Specify the required variable.

EXH3059 You must specify the system voice segment server.

**Explanation:** The variable "sys_seg_server" (which specifies the network name of the database server through which system segments are accessed) was not specified in the start-up control file.

**User Response:** Specify the required variable in the start-up control file.

EXH3060 The system could not find two numbers for comparison.

**Explanation:** You specified the action Compare_Numbers, but two values to be compared were not identified.

**User Response:** Be sure that both values for comparison are specified.

EXH3061 The system could not find two values for comparison.

**Explanation:** You specified the action CompareChars, but two values to be compared were not identified.

**User Response:** Be sure that both values for comparison are specified.

EXH3062 Search_Screen could not find required parameter: <number>

**Explanation:** You specified the action Search_Screen, but one of the required parameters is not specified. The number of the missing parameter is given in the message.

**User Response:** Be sure that all required values are specified.

EXH3063 Send_Keys_to_Scr could not find required parameter: <number>

**Explanation:** You specified the action Send_Keys_to_Scr, but one of the required parameters is not specified. The number of the missing parameter is given in the message.

**User Response:** Be sure that all required values are specified.

EXH3064 Get_Screen_Data could not find required parameter: <number>

**Explanation:** You specified the action Get_Screen_Data, but one of the required parameters is not specified. The number of the missing parameter is given in the message.

**User Response:** Be sure that all required values are specified.
EXH3065 Disconnect_Scr could not find required variable: <number>

**Explanation:** You specified the action Disconnect_Scr, but one of the required variables is not specified. The number of the missing variable is given in the message.

**User Response:** Be sure that all required values are specified.

EXH3070 You have not specified enough parameters to perform Calculate.

**Explanation:** You specified the action Calculate but did not specify all required parameters.

**User Response:** Be sure that all required values are specified.

EXH3071 You must specify a variable to receive the result of a Calculate.

**Explanation:** You specified the action Calculate but did not specify the name of a variable to hold the result of the action.

**User Response:** Specify the name of the required variable.

EXH3072 You must specify a valid numeric value 1 to perform Calculate.

**Explanation:** You specified the action Calculate but either you did not specify the required "Value 1", or it is not numeric, or the value is not in the range -2147483646 to 2147483646.

**User Response:** Specify a valid numeric value.

EXH3073 You must specify a valid numeric value 2 to perform Calculate.

**Explanation:** You specified the action Calculate but either you did not specify the required "Value 2", or it is not numeric, or the value is not in the range -2147483646 to 2147483646.

**User Response:** Specify a valid numeric value.

EXH3074 The valid operations for Calculate are: +, -, *, /, and %

**Explanation:** You specified the action Calculate but either you did not specify the required operation code or it is not valid.

**User Response:** Check the specified operation code.

EXH3075 The system cannot divide by zero.

**Explanation:** You specified the action Calculate but the parameters given would require the system to divide by zero.

**User Response:** Check the specified values or correct the operation code.

EXH3076 The specified minimum is greater than the maximum for Get_Tone_String.

**Explanation:** You specified the action Get_Tone_String, but one of the minimum/maximum parameter specifications is incorrect:

- The minimum number of tones requested was specified to be greater than the maximum number of tones.
- One of the values is not numeric.
- One of the values is negative or zero.

**User Response:** Specify a minimum that is less than or equal to the maximum.

EXH3077 The specified minimum is greater than the maximum for Get_Voice_Resp.

**Explanation:** You specified the action Get_Voice_Resp, but one of the minimum/maximum parameter specifications is incorrect.

- The minimum number of responses requested was specified to be greater than the maximum number of responses.
- One of the values is not numeric.
- One of the values is negative or zero.

**User Response:** Specify a minimum that is less than or equal to the maximum.

EXH3080 Play_Text parameter was missing or incorrect: <number>

**Explanation:** You specified the action Play_Text_Record, but one of the required parameters is not specified or is not valid. The number of the missing parameter is given in the message.

**User Response:** Be sure that all required values are specified correctly.

EXH3081 Play_Voice parameter was missing or incorrect: <number>

**Explanation:** You specified the action Play_Voice, but one of the required parameters is not specified or is not valid. The number of the missing parameter is given in the message.

**User Response:** Be sure that all required values are specified correctly.
EXH3082 Record_Voice parameter was missing or incorrect: <number>

Explanation: You specified the action Record_Voice, but one of the required parameters is not specified or is not valid. The number of the missing parameter is given in the message.

User Response: Be sure that all required values are specified correctly.

EXH3083 Delete_Voice parameter was missing or incorrect: <number>

Explanation: You specified the action Delete_Voice, but one of the required parameters is not specified or is not valid. The number of the missing parameter is given in the message.

User Response: Be sure that all required values are specified correctly.

EXH3084 The system cannot play this value as a number: <text>

Explanation: You requested the action Play_Module to play the value given in the message as a number, but it is not valid to do so.

User Response: Specify a numeric value of 12 digits or fewer.

EXH3085 The system cannot play this value as a date: <text>

Explanation: You requested the action Play_Module to play the value given in the message as a date, but it is not valid to do so.

User Response: Specify a valid date to be spoken. The format is YYYYMMDD.

EXH3086 The system cannot play this value as a time: <text>

Explanation: You requested the action Play_Module to play the value given in the message as a time, but it is not valid to do so.

The format for time is HHMM where hours are 00-24 and minutes 00-59.

User Response: Specify a valid time to be spoken.

EXH3087 Play_Text_String could not find required parameter: <number>

Explanation: You specified the action Play_Text_String, but one of the required parameters is not specified or is not valid. The number of the missing parameter is given in the message.

User Response: Be sure that all required values are specified correctly.

EXH3088 You must specify a valid numeric value 1 to perform Compare_Numbers.

Explanation: You specified the action Compare_Numbers but either you did not specify the required "Value 1", or it is not numeric, or the value is not in the range -2147483646 to 2147483646.

User Response: Specify a valid numeric value.

EXH3089 You must specify a valid numeric value 2 to perform Compare_Numbers.

Explanation: You specified the action Compare_Numbers but either you did not specify the required "Value 2", or it is not numeric, or the value is not in the range -2147483646 to 2147483646.

User Response: Specify a valid numeric value.

EXH3090 You must specify a valid value 1 to perform Compare_Chars.

Explanation: You specified the action Compare_Chars but you did not specify the required "Value 1".

User Response: Specify the required value.

EXH3091 You must specify a valid value 2 to perform Compare_Chars.

Explanation: You specified the action Compare_Chars but you did not specify the required "Value 2".

User Response: Specify the required value.

EXH3092 You must specify a valid value 1 to perform Free_Resource.

Explanation: You specified the action Free_Resource but either you did not specify the required "Value 1" or it is not valid. Valid values are "VR", "TTS", "TDD", or "ADSI".

User Response: Specify the required value correctly.

EXH3093 You must specify a valid value 1 to perform Assign_Resource.

Explanation: You specified the action Assign_Resource but either you did not specify the required "Value 1" or it is not valid. Valid values are "VR", "TTS", "TDD", or "ADSI".

User Response: Specify the required value correctly.
EXH3094  Telephony Server error return code
   <number>
Explanation: An unexpected error was received from the Telephony Server.
User Response: Review the other messages to determine the cause of the error.

EXH3095  Value 3 if used must be defined to use Branch.
Explanation: You specified a variable which does not exist for parameter 3, the override value, for the Branch action.
User Response: Create the variable and set it to the override value that you require.

EXH3096  Value 1 must be specified to use Branch.
Explanation: You did not specify a variable name or the variable is not defined for the Branch action to use. The Branch action branches on this variable's value.
User Response: Specify a variable for the action to Branch on.

EXH3097  Value 2 if used must be defined to use Branch.
Explanation: You have specified a variable for parameter 2 but the variable specified has not been set to a value.
User Response: Specify a variable or a literal value for the case sensitive parameter. If you specify a literal, you must enclose it in quotes. Ensure that if you specified a variable it has been set to some value.

EXH3098  Override specification is invalid.
Explanation: The override parameter can be a literal or a variable. It is made up of one or more definitions, where a definition has the following syntax:
a = n
where a is 1 or more characters, and n is the return code to which it is assigned. Use a colon to divide successive definitions.
User Response: Specify the override correctly.

EXH3099  Attempt to access outside the defined screen size of <text>
Explanation: An attempt was made to access characters outside the size of the screen.
User Response: Amend the application so that it only accesses characters within the screen.

EXH3099  Wait_Scr_Update could not find required parameter: <number>
Explanation: You specified the action Wait_Scr_Update, but one of the required parameters is not specified. The number of the missing parameter is given in the message.
User Response: Be sure that all required values are specified correctly.

EXH3100  The row value must be numeric.
Explanation: You specified a row that was not a number. You must specify a numeric value for a row.
User Response: Specify a number for the row value.

EXH3101  The column value must be numeric.
Explanation: You specified a column that was not a number. You must specify a numeric value for a column.
User Response: Specify a number for the column value.

EXH3102  The wait value must be numeric.
Explanation: You specified a wait that was not a number. You must specify a numeric value for a wait.
User Response: Specify a number for the wait value.

EXH3103  The row number is outside the screen area.
Explanation: You specified a row number that was not within the valid range.
User Response: Specify a row value within the range: 1-24.

EXH3104  The column number is outside the screen area.
Explanation: You specified a column number that was not within the valid range.
User Response: Specify a column value within the range: 1-80.

EXH3105  The length value must be numeric.
Explanation: You specified a length that was not a number.
User Response: Specify a number for the length value.
<table>
<thead>
<tr>
<th>EXH3107</th>
<th>Wait_for_Call was canceled, and the phone line is now disconnected.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>The Wait_for_Call action was interrupted and there is no off-hook telephone line. The Wait_for_Call action must be requested again before you continue.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Perform the Wait_for_Call action.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3109</th>
<th>The user action specified is not valid. The voice program has ended.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>An action has been used in a voice program, but not defined in the user action table of DirectTalk/2</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Check that the action is defined to DirectTalk/2 in the user actions details window in the Voice Application Developer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3110</th>
<th>Clock number must be in the range: 1-8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You specified a clock number that was not within the valid range.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a clock value within the range: 1-8.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3113</th>
<th>You did not specify enough parameters to perform a concatenate.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You did not specify all the required parameters to perform a concatenate.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify all required parameters to perform concatenate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3114</th>
<th>You must specify a valid value 1 to perform a concatenate.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You did not specify the value 1 parameter or you referred to a variable that does not exist.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a value 1 parameter or a valid variable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3115</th>
<th>You must specify a valid value 2 to perform a concatenate.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You did not specify the value 2 parameter or you referred to a variable that does not exist.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a value 2 parameter or a valid variable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3116</th>
<th>You must specify a variable to receive the result of a concatenate.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You must specify the name of the variable to receive the result of a concatenate.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a variable name to receive the result of a concatenate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3117</th>
<th>The result of concatenate was truncated to 4096 characters.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>There is a system limit on the length of a data value that can be handled in variable storage. The result of the concatenate operation is longer than the limit of 4096 characters.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Use concatenate on shorter source strings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3118</th>
<th>You did not specify enough parameters to perform Get_Substring.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You must specify all parameters to perform Get_Substring.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify all parameters to perform Get_Substring.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3119</th>
<th>You must specify a variable to receive the result of Get_Substring.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You must specify a variable name to receive the result of Get_Substring.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a variable name to receive the result of Get_Substring.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3120</th>
<th>You must specify a valid source data parameter to perform Get_Substring.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You must specify a valid source data parameter to perform Get_Substring.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a valid source data parameter to perform Get_Substring.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3121</th>
<th>The starting location must be greater than zero to perform Get_Substring.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>You must specify a starting location that is numeric and greater than zero to perform Get_Substring.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a numeric starting location that is greater than zero to perform Get_Substring.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXH3122</th>
<th>You must specify a numeric length parameter to perform Get_Substring.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation:</strong></td>
<td>The length parameter on Get_Substring was not numeric.</td>
</tr>
<tr>
<td><strong>User Response:</strong></td>
<td>Specify a numeric length parameter.</td>
</tr>
</tbody>
</table>
EXH3123  The result of the Calculate operation is not a valid numeric value.

Explanation:  The result of the calculate operation is not within the valid numeric range. The valid numeric range is from -2,147,483,646 to +2,147,483,646.

User Response:  Perform calculations with resulting values within this range.

EXH3124  You did not specify enough parameters to perform Get_Length.

Explanation:  You did not specify all required parameters to perform Get_Length.

User Response:  Specify all required parameters to perform Get_Length.

EXH3125  You must specify a variable to receive the result of Get_Length.

Explanation:  You did not specify a variable name to receive the result of Get_Length.

User Response:  Specify a variable name to receive the result of Get_Length.

EXH3126  You must specify a valid source data parameter to perform Get_Length.

Explanation:  You must specify a valid source data parameter to perform Get_Length.

User Response:  Specify a valid source data parameter to perform Get_Length.

EXH3127  You did not specify enough parameters to perform Search_String.

Explanation:  You did not specify all required parameters to perform Search_String.

User Response:  Specify all required parameters to perform Search_String.

EXH3128  You must specify a variable to receive the result of Search_String.

Explanation:  You did not specify a variable name to receive the result of Search_String.

User Response:  Specify a variable name to receive the result of Search_String.

EXH3129  You must specify a valid source data parameter to perform Search_String.

Explanation:  You must specify a valid source data parameter to perform Search_String.

User Response:  Specify a valid source data parameter to perform Search_String.

EXH3130  You must specify a valid search data parameter to perform Search_String.

Explanation:  You must specify a valid search data parameter to perform Search_String.

User Response:  Specify a valid search data parameter to perform Search_String.

EXH3131  The starting location must be greater than zero to perform Search_String.

Explanation:  You must specify a starting location that is numeric and greater than zero or specify an existing variable that contains a numeric value to perform Get_Substring.

User Response:  Specify a numeric starting location that is greater than zero or an existing variable that contains a numeric value to perform Get_Substring.

EXH3132  There is not enough storage to load application: <name>.

Explanation:  You must ensure enough storage is available before loading the application.

User Response:  Ensure enough storage is available to load the application. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH3133  You must specify a valid source data parameter to perform Set_Variable.

Explanation:  You must specify a valid source data parameter to perform Set_Variable.

User Response:  Specify a valid source data parameter to perform Set_Variable.

EXH3134  The result of Set_Variable could not be stored in the specified variable. This is an internal error.

Explanation:  The result of the Set_Variable you selected could not be stored in the specified variable due to an internal system error.

User Response:  Check that the name of the variable is correct. If the problem persists, report it to your service representative.

EXH3135  You must specify a valid search argument to perform Search_Directory.

Explanation:  You must specify a valid search argument to perform Search_Directory.

User Response:  Specify a valid search argument to perform Search_Directory.
EXH3136  The directory server session did not open.
Explanation: The directory server session you selected did not open due to an error. Additional error messages will identify the problem.
User Response: Review all messages to determine the cause of the error.

EXH3137  Play_Module could not find the segment: <name>
Explanation: The segment name must be contained in the segment database.
User Response: Specify a valid segment name that exists in the voice segment database to activate Play_Module.

EXH3138  The system could not access Voice Logic Module server: <name>
Explanation: The logic module server you selected could not be accessed.
User Response: Review each preceding message for cause of error.

EXH3139  You must specify a valid value 3 to perform Play_Module.
Explanation: You specified the action Play_Module but either you did not specify the required “Value 3” or it is not valid. Valid values are 0 if no voice cut-through is required, -1 if voice detection is required and a vocabulary number if word detection is required.
User Response: Specify the required value correctly.

EXH3140  You must specify a valid value 4 to perform Play_Module.
Explanation: You specified the action Play_Voice but either you did not specify the required “Value 4” or it is not valid. Valid values are 0 if no voice cut-through is required, -1 if voice detection is required and a vocabulary number if word detection is required.
User Response: Specify the required value correctly.

EXH3141  You must specify all of the required parameters to perform Play_Module.
Explanation: You have not specified all of the required parameters to perform Play_Module.
User Response: Specify all required parameters.

EXH3142  Step reference missing in return code: <number>
Explanation: You must specify a step reference for the identified return code.
User Response: Specify the step reference.

EXH3143  Could not access action logic modules or segments, see help.
Explanation: A voice recognition action attempted to play a voice logic module as part of its processing but could not access the required voice logic modules or segments. The action uses voice logic modules and segments contained in the EVRxx application databases, where xx is the voice sampling rate you use on your system.
User Response: The segments must be recorded before the action can be used. Copy the logic modules and segments to the SYSTM application.

EXH3144  Valid values for parameter <number> are Y or N.
Explanation: Valid values for the given parameter are ‘Y’ or ‘N’.
User Response: Specify ‘Y’ or ‘N’ for the incorrect parameter.

EXH3145  Incorrect record or key length specified when the database created.
Explanation: Record_Voice cannot take place because the database you specified is not large enough to store the voice records. When creating the database the record size must be greater than 4095 and the key length must be greater than 18.
User Response: Recreate the database with a record size of 4096 and key size of 19.

EXH3146  Could not open a session with the statistics server <name>.
Explanation: A session could not be opened with the statistics server shown.
User Response: Check that the application variable stat_server has been set correctly and retry the operation.

EXH3147  The statistics server name <name> was not found.
Explanation: You have not specified a valid value for the application variable stat_server
User Response: Set the application variable stat_server correctly.
EXH3148 Network error, RC <number>.

Explanation: A network error has occurred. The Return Code shown is the number of one of the messages listed in “NetBIOS Messages (0300-0599)” on page 3-17.

User Response: Find the RC message number in “NetBIOS Messages (0300-0599)” on page 3-17 and follow the explanation and response given there.

EXH3149 Server <name> unavailable, data not logged.

Explanation: The server shown was not available to carry out the requested command.

User Response: Restart the server shown and retry the operation.

EXH3150 You must specify a valid Device requirement to perform Assign_Resource.

Explanation: You have not specified a valid device requirement. The Device requirements parameter allows specific requirements to be specified for the channel being assigned. This is an optional parameter. If it is not specified, any free channel that can be linked to the current voice line is assigned. If there is no free channel that meets the requirement, or if the requirements are not recognized by the installed version of the device, the Not Available action return is taken.

You can specify one or more requirements. Normally only one is required to obtain a suitable resource channel. If more than one is specified they are joined together using a ‘+’.

The requirements are either just a keyword indicating a feature that must be supported by the channel or a keyword and a value separated by ‘=’ indicating that the feature indicated by the keyword must have the value specified. The keywords differ depending on the device type; they are case independent.

VR Keywords

CONT Select a channel that supports Continuous VR.
DISC Select a channel that supports discrete VR.
VSTOP Select a channel that supports prompt voice stop.
CUTTHRU Select a channel that supports prompt voice stop with word recognition.
VOCAB=value Select a channel that has the vocabulary specified by “value” loaded. The vocabulary name is given without a file extension.

TTS Keywords

DICT=value Select a channel that has the exception dictionary specified by "value" loaded. The exception dictionary file name is specified with a file extension.

User Response: Specify a valid device requirement.

EXH3151 You must specify a text variable name to perform Receive_TDD.

Explanation: You must specify a variable name to hold the data received from the TDD device.

User Response: Specify a variable name. If it does not already exist it will be created automatically by the action.

EXH3152 If specified, duration must be a valid numeric number.

Explanation: You have specified the duration value but you have not specified a number greater than 0.

User Response: Specify a number greater than 0 or leave this parameter blank.

EXH3153 You must specify a valid maximum characters parameter.

Explanation: You did not define the maximum number of characters that a caller can send.

User Response: Specify a literal value or a variable which contains the maximum number of characters that a caller can send.

EXH3154 You must specify a valid text variable name to perform Send_TDD_String.

Explanation: You must specify a text variable name which contains the data to be sent to the TDD device.

User Response: Define a text variable containing information to be sent to the TDD device.

EXH3155 You must specify this parameter to perform Send_TDD: <text>

Explanation: You did not specify the parameter identified in the message.

User Response: Specify the required parameter.

EXH3156 Insufficient memory available to perform Receive_TDD.

Explanation: The Receive_TDD action requested memory from the system but none was available.

User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.
EXH3157  You must use a value from 1 to 23 for: <text>

Explanation: You defined a value for the specified parameter but it was not in the range 1 to 23.
User Response: Specify a value within the range 1 to 23.

EXH3200  You specified too many or too few parameters to perform Take_a_Message.

Explanation: You must specify all required parameters to perform Take_a_Message.
User Response: Specify all required parameters to perform Take_a_Message.

EXH3201  This mailbox parameter must be a number to perform Take_a_Message: <text>

Explanation: You must specify a numeric mailbox value or specify a variable that contains a number to perform Take_a_Message.
User Response: Specify a numeric mailbox value or a variable that contains a number to perform Take_a_Message.

EXH3202  Take_a_Message could not establish a session with mailbox server: <name>

Explanation: Your attempt to access the mailbox server ended in a system error.
User Response: Review the preceding messages for the cause of the error.

EXH3203  You must specify a valid mailbox server to perform Take_a_Message.

Explanation: You must specify the mailbox server variable and the network name to perform Take_a_Message.
User Response: Specify the mailbox server variable and the network name to perform Take_a_Message.

EXH3204  Take_a_Message could not find mailbox number: <number>

Explanation: You selected a mailbox server that is not in the mailbox database.
User Response: Specify a valid mailbox server variable to perform Take_a_Message.

EXH3205  Take_a_Message could not access the mailbox server.

Explanation: Your attempt to access the mailbox server ended in a system error.
User Response: Review the preceding messages for the cause of the error.

EXH3206  Greeting type must be System, User or None. It was set to System.

Explanation: You must select a greeting type of System, User, or None.
User Response: Specify a greeting type of System, User, or None.

EXH3207  Take_a_Message could not find name segment: <name>

Explanation: You specified a name segment that does not exist in the database indicated by the message.
User Response: Specify a name segment that exists in the database indicated by the message.

EXH3208  Take_a_Message could not find user greeting: <name> It will use the system greeting.

Explanation: You specified a greeting name that was not found in the greeting database. The greeting defaults to the System greeting.
User Response: Specify a greeting name that is contained in the greeting/names database.

EXH3209  You have not specified all the parameters required to play a user greeting. Take_a_Message will use the system greeting.

Explanation: You must specify all the required variables for a User greeting. If all the variables are not specified the action defaults to the System greeting.
User Response: Specify all the required parameters to play a User greeting.

EXH3210  Take_a_Message could not find database: <name>

Explanation: You must specify a valid database name to perform Take_a_Message.
User Response: Specify a valid database name to perform Take_a_Message.
EXH3211 The maximum recording time must be an integer greater than 0.

**Explanation:** You tried to specify a time that was not numeric, or you specified a variable that either did not exist or did not contain a number less than 600 seconds.

**User Response:** Specify a numeric time or an existing variable that contains a number less than 600 seconds.

EXH3212 `Take_a_Message` could not find the message repository database.

**Explanation:** The message repository database you tried to specify for the variable does not exist. You must specify a valid message repository database name for the variable.

**User Response:** Specify a valid message repository database name.

EXH3213 An internal logic error occurred while performing `Take_a_Message`. Notify your system administrator.

**Explanation:** An internal error occurred while processing the action `Take_a_Message`.

**User Response:** Report this problem to your service representative, supplying the GSI log.

EXH3220 You specified too many or too few parameters to perform `Get_Messages`.

**Explanation:** You tried to perform `Get_Messages` and you did not specify the required number of parameters.

**User Response:** Specify all required parameters for `Get_Messages`.

EXH3221 This mailbox parameter must be a number to perform `Get_Messages`:

**Explanation:** You tried to perform `Get_Messages` and did not specify a mailbox number or an existing variable that contains a number.

**User Response:** Specify a mailbox number or a variable that contains a number.

EXH3222 `Get_Messages` could not establish a session with mailbox server: `<name>`.

**Explanation:** You tried to access a mailbox server that could not be accessed.

**User Response:** Specify a valid mailbox server.

EXH3223 You must specify a valid mailbox server to perform `Get_Messages`.

**Explanation:** You tried to perform `Get_Messages` and did not specify a valid mailbox server.

**User Response:** Specify a valid mailbox server.

EXH3224 `Get_Messages` could not find this mailbox and notebook combination: `<text>`.

**Explanation:** You tried to perform `Get_Messages` and did not specify a valid mailbox/notebook combination.

**User Response:** Specify a valid mailbox/notebook combination.

EXH3225 `Get_Messages` could not access the mailbox server.

**Explanation:** You tried to perform `Get_Messages` and did not specify a valid mailbox server.

**User Response:** Specify a valid mailbox server.

EXH3226 `Get_Messages` could not find the message repository database.

**Explanation:** You tried to perform `Get_Messages` and did not specify a correct message repository database name.

**User Response:** Specify a valid message repository database name.

EXH3227 `Get_Messages` could not find database: `<name>`.

**Explanation:** You tried to perform `Get_Messages` and did not specify a correct database name for the named variable.

**User Response:** Specify a valid database name.

EXH3228 Scan type must be either Locked or Shared to perform `Get_Messages`.

**Explanation:** You tried to perform `Get_Messages` and did not specify the scan type as Locked or Shared.

**User Response:** Specify the scan type as either Locked or Shared.

EXH3229 Scan class must be Voice to perform `Get_Messages`.

**Explanation:** You tried to perform `Get_Messages` and did not specify the scan class as Voice.

**User Response:** Specify the scan class as Voice.
EXH3230  Get_Messages could not establish a session with directory server: <name>

Explanation: You tried to perform Get_Messages and did not specify a valid directory server name.
User Response: Specify a valid directory server name.

EXH3231  You must define the directory server to allow forwarding. Get_Messages continues without the forwarding option.

Explanation: You tried to perform Get_Messages forwarding option and did not define the directory server. Without defining the directory server, Get_Messages continues without the forwarding option.
User Response: Define the directory server to perform the forwarding option.

EXH3232  Get_Messages has detected a mailbox error. The Return Code is: <number>

Explanation: You tried to perform Get_Messages and a mailbox error was detected.
User Response: Check the meaning of the return code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. Review preceding messages to determine the cause.

EXH3233  Variable name prefix must be 1 to 6 characters for Search_Directory: <text>

Explanation: You tried to perform Search_Directory and did not specify the variable name prefix as a 1 to 6 character value.
User Response: Specify the variable name prefix as a 1 to 6 character value.

EXH3234  You must specify an identification value to perform Put_User_Info.

Explanation: You tried to perform Put_User_Info and did not specify an identification value.
User Response: Specify an identification value.

EXH3235  Variable name prefix must be 1 to 6 characters for Put_User_Info.

Explanation: You tried to perform Put_User_Info and did not specify the variable name prefix as a 1 to 6 character value.
User Response: Specify a variable name prefix of 1 to 6 characters.

EXH3236  The system could not access the voice/text Database Server: <name>

Explanation: You tried to access a voice database server that is not active. Review preceding messages for further information.
User Response: You must specify an active voice database server. Ensure that the specified Telephony Server is correct and active.

EXH3237  The system could not find voice/text database: <filename>

Explanation: The named voice database cannot be located through the specified database server.
User Response: Ensure that the named database exists through the specified server.

EXH3238  The system could not find voice/text segment: <name>

Explanation: The named voice segment cannot be found in the specified database.
User Response: Ensure that the named segment exists in the specified database.

EXH3239  You must specify a paging phone number to perform Put_User_Info.

Explanation: Paging was requested through <prefix>_pagetype but the variable <prefix>_pagephon was not specified.
User Response: Specify a paging phone number in <prefix>_pagephon.

EXH3240  You must specify a DTMF tone string to perform Put_User_Info.

Explanation: Digital paging was specified but no DTMF tone string was specified in <prefix>_pagedata.
User Response: If you require digital paging, specify a DTMF tone string in <prefix>_pagedata.

EXH3241  The paging type must be V or D to perform Put_User_Info.

Explanation: You tried to perform Put_User_Info and did not specify a paging type of V or D or null.
User Response: Specify either a V or a D in the variable <prefix>_pagetype.
EXH3242  The system could not find the specified record to update.
Explanation: The directory record for the identification value specified was not found in the directory.
User Response: Ensure that the identification value specified was valid.

EXH3243  Put_User_Info could not access the directory server.
Explanation: The action Put_User_Info encountered an error in attempting to access the directory server.
User Response: Review preceding messages to determine the cause of this error.

EXH3244  Log_Message could not find the specified message ID.
Explanation: The specified message ID was not found in the usrlogmsg.ere user message file.
User Response: Ensure that the specified message ID is valid.

EXH3245  You must specify this parameter to perform Get_Record: <text>
Explanation: A required parameter for the action is missing or a variable referred to contains no data.
User Response: Specify all required parameters.

EXH3246  The key specified is too long for the database.
Explanation: The key specified was longer than the length of the key defined for the requested database.
User Response: Ensure that the specified key is consistent with the key length of the database being accessed.

EXH3247  The database record is longer than 4096 characters.
Explanation: There is a system limit on the length of a record that can be handled in variable storage, and the record that was requested is longer than the limit of 4096 characters.
User Response: Ensure the database records do not exceed 4096 characters.

EXH3248  The system could not connect to the specified terminal.
Explanation: An error occurred whilst attempting to connect to the terminal emulator specified in the terminal server parameters of this action.
User Response: Review preceding messages for the cause of the error.

EXH3249  The system could not access greeting and names Database Server: <name>
Explanation: The server specified in the variable tmsg_g/n_server cannot be accessed. The preceding messages will indicate the exact cause.
User Response: Ensure that the greeting/names database server specified in the variable tmsg_g/n_server is correct.

EXH3250  The system could not find greeting and names database: <filename>
Explanation: The greeting/names database name specified in the variable tmsg_g/n_db was not found.
User Response: Ensure that the database name specified in the variable tmsg_g/n_db is correct.

EXH3251  The system could not access message Database Server: <name>
Explanation: The server specified for access to the message repository cannot be accessed.
User Response: Review the preceding message to establish the exact cause. Ensure that the name of the database server specified in the variable tmsg_msg_server or gmsg_msg_server is correct.

EXH3252  The system could not find message repository database: <filename>
Explanation: The message repository database name specified in the variable tmsg_msg_db or gmsg_msg_db cannot be found.
User Response: Ensure that the message repository database name given in the variable tmsg_msg_db or gmsg_msg_db is correct.

EXH3253  The step specifies an undefined action.
Explanation: The action code for this step could not be found in the user action table file.
User Response: Review the user action table file usracttb.tbe to ensure that the action for this step is defined.

EXH3254  Step refers to undefined step <number> in return code <number>
Explanation: The current step refers to an undefined step in the indicated return code.
User Response: Ensure that the step number referred to in the specified return code does exist.
EXH3255  The system could not find Voice Logic Module: <name>

Explanation:  This Play_Module action refers to a Voice Logic Module that does not exist.
User Response:  Check that the Voice Logic Module specified for this Play_Module action is correct.

EXH3256  VLM: <name> refers to undefined voice/text segment: <name>

Explanation:  The Voice Logic Module named refers to a voice segment that cannot be found.
User Response:  Determine whether the voice segment name in the voice logic module is present and correct.

EXH3257  The step is not referenced by another program step.

Explanation:  The indicated step is not referenced by any other step in the voice program.
User Response:  Determine whether or not the step should be referenced by any other step.

EXH3258  You must specify return code: <number>

Explanation:  You specified an action but you did not specify a goto edge for the specified return code.
User Response:  Specify the required return code. (See the System Actions Return Codes in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1).

EXH3259  You must specify parameter: <text>

Explanation:  The parameter shown is missing.
User Response:  Supply the parameter.

EXH3260  Load of Action DLL failed. <name>

Explanation:  DirectTalk/2 cannot load a user action DLL.
User Response:  Check that the DLL exists in the DirectTalk/2 DLL library.

EXH3261  Action function could not be accessed. <name>

Explanation:  DirectTalk/2 cannot access the named function within a DLL.
User Response:  Check that the function name has been specified correctly in the user action details window.

EXH3262  You must specify a phone number to perform action: <text>.

Explanation:  You must specify a phone number to perform the actions shown (such as Call_Transfer and Call_Referral).
User Response:  Specify a phone number.

EXH3263  If specified, Final State must be valid to perform <text>.

Explanation:  The final state parameter you specified on the action shown (such as Call_Extend_Init) was invalid. The parameter specifies how the call is probably going to complete. Valid values are TRANSFER, REFERRAL or EITHER.
User Response:  Specify a valid final state parameter.

EXH3264  If specified, Screen Level must be valid to perform <text>.

Explanation:  You must specify a valid screen level parameter to perform the action shown (such as Call_Transfer). This value defines the minimum level of screening required. Valid values are NONE, FULL, DIALED, or RINGING.
User Response:  Specify a valid screen level parameter.

EXH3265  Screen level parameter must be specified.

Explanation:  You must specify a screen level parameter to perform this action (such as Call_Transfer). This value defines the minimum level of screening required. Valid values are NONE, FULL, DIALED, or RINGING.
User Response:  Specify a valid screen level parameter.

EXH3266  Value of Valid Connections parameter is invalid.

Explanation:  The valid connections parameter you specified on an action (such as Call_Extend_Init, Call_Transfer or Call_Referral) was invalid. A combination of the keywords ANSWER, FAX and OPERATOR is valid. The keywords can be combined using +, & or a space.
User Response:  Specify a valid value.

EXH3267  You must specify a timeout value to perform Set_Timeout.

Explanation:  The Set_Timeout action must have a timeout value specified to it, but you did not supply one.
User Response:  Specify a timeout value in seconds.
EXH3270  The system could not find message code: <number>

Explanation: A system message was requested but it could not be located.

User Response: Report this error to your service representative.

EXH3271  The system could not find user message: <number>

Explanation: A request for a user message was processed but the user message was not found in the usrlogms.ere file.

User Response: Ensure that the requested user message is in the usrlogms.ere user message file.

EXH3272  You must specify all the required parameters to perform this action.

Explanation: One or more parameters are missing.

User Response: Ensure that all of the required parameters are specified.

EXH3273  You did not specify enough parameters to perform Check_Password.

Explanation: Not all of the required parameters for this action were specified.

User Response: Specify all of the required parameters.

EXH3274  You did not specify a user identification value to perform Check_Password.

Explanation: The required user identification value was not specified.

User Response: Ensure that the user identification value is specified or that the referenced variable does exist.

EXH3275  You must specify an input password.

Explanation: The required password to be checked was not specified.

User Response: Ensure that the password to be checked is specified or that the referenced variable does exist.

EXH3276  This voice program stopped unexpectedly: <name>.

Explanation: OS/2 detected an error during execution of the Application Manager.

User Response: If the displayed OS/2 Trap screen indicated after review that the error occurred in a user action, correct that action. Otherwise, note down the contents of the Trap screen and report this problem to your service representative.

EXH3277  The telephone was hung up. You must re-establish the connection.

Explanation: During the course of using the Directory Manager, the user hung up the phone but has now requested a function that requires the use of the phone.

User Response: When requested, the user should reinitialize the phone connection.

EXH3279  The emulator session with the host system has been disconnected.

Explanation: DirectTalk/2 cannot access the host session because the session with the host is disconnected.

User Response: Look at the log for the emulator to determine why the session was disconnected.

EXH3280  This screen session has been disconnected.

Explanation: Information message. Access has been lost to the host session. Either the application has disconnected the screen or the host has gone down.

User Response: No response is required.

EXH3281  The current active voice language is not supported.

Explanation: DirectTalk/2 does not currently support the language you specified for the voice_language parameter.

User Response: Specify a language for the voice_language parameter that DirectTalk/2 does support.

EXH3282  You must specify this parameter to perform Add_Record: <text>

Explanation: You either (a) did not specify a value for the database key, server name, database file name, or maximum database record size, or (b) the value you did specify for one or more of the parameters exceeds the maximum length allowed.

User Response: Specify any missing values for the parameters, or specify the correct values for the parameters.
EXH3283 You must specify this parameter to perform Delete_Record: <text>

Explanation: You either (a) did not specify a value for the database key, server name, database file name, or maximum database record size, or (b) the value you did specify for one or more of the parameters exceeds the maximum length allowed.

User Response: Specify any missing values for the parameters, or specify the correct values for the parameters.

EXH3284 You must specify this parameter to perform Get_Next_Record: <text>

Explanation: You either (a) did not specify a value for the database key, server name, database file name, or maximum database record size, or (b) the value you did specify for one or more of the parameters exceeds the maximum length allowed.

User Response: Specify any missing values for the parameters, or specify the correct values for the parameters.

EXH3285 You must specify this parameter to perform Update_Record: <text>

Explanation: You either (a) did not specify a value for the database key, server name, database file name, or maximum database record size, or (b) the value you did specify for one or more of the parameters exceeds the maximum length allowed.

User Response: Specify any missing values for the parameters, or specify the correct values for the parameters.

EXH3286 The system cannot play this value as currency: <text>

Explanation: The value you specified for the currency (CUR) type in the voice logic module is incorrect.

User Response: Specify a valid currency value for the CUR type for the voice logic module.

EXH3287 The input key length is not equal to the file key length.

Explanation: The key length you specified does not match the key length specified when the database was created.

User Response: Use the Database Display Utility in the Voice Application Developer to determine the key length that was specified when the database was created. Specify that same key length. Use blanks if necessary when specifying the correct key length.

EXH3288 The input record length is greater than the file record length.

Explanation: The length of the record you specified is greater than the record length specified when the database was created.

User Response: Use the Database Display Utility in the Voice Application Developer to determine the record length that was specified when the database was created. Specify a record length which is less than or equal to the record length that was specified when the database was created.

EXH3289 You must specify a variable for this parameter: <text>

Explanation: You specified a literal for this parameter. You must specify a variable.

User Response: Specify a variable for this parameter.

EXH3290 The key length must be in the range 1-49.

Explanation: The key length you specified is not the same key length that was specified when the database was created.

User Response: Use the Database Display Utility in the Voice Application Developer to determine the key length that was specified when the database was created. Specify a key length which is less than or equal to the key length which was specified when the database was created.

EXH3291 The segment name for Play_Module must be 1 to 15 characters long.

Explanation: The segment name you specified for the Play_Module action is greater than 15 characters which is the system limit.

User Response: Specify a segment name which is less than 16 characters in length.

EXH3292 A user information variable is missing for Put_User_Info: <text>

Explanation: The user information variable specified in the message needs to be defined in order to use Put_User_Info.

User Response: Define the variable specified in the message.

EXH3293 The valid range for the number of forwarding digits is 1 to 25.

Explanation: You specified an invalid forward digits parameter value.

User Response: Specify a forward digits parameter value which is less than 26.
Mailbox Messages (3300-3319)

**EXH3301** The system could not find the specified mailbox number.
Explanation: The mailbox number passed to a mailbox server function was found not to exist in the mailbox database.
User Response: Ensure that the mailbox number passed to the mailbox function does exist.

**EXH3302** The system could not find the specified notebook in the mailbox database.
Explanation: The notebook name passed to a mailbox server function was found not to exist in the mailbox database.
User Response: Ensure that the notebook name passed to the mailbox server function does exist.

**EXH3303** The system could not find the specified item number in the mailbox database.
Explanation: The item number passed to a mailbox server function does not exist in the specified mailbox.
User Response: Ensure that the item number passed to a mailbox server function does exist in the mailbox database.

**EXH3304** There is not enough room in the mailbox for a new item.
Explanation: Each notebook of a mailbox cannot contain more of a maximum number of messages.
User Response: Use the Mailbox Manager to change the affected user’s directory entry to increase the maximum number of mailbox messages, or delete unwanted messages from the user’s mailbox, or archive some messages into another notebook.

**EXH3305** The system could not find specified item segment in the mailbox database.
Explanation: The requested item segment does not exist in the mailbox and item specified.
User Response: Ensure that the item segment requested from the mailbox server does exist in the mailbox and item specified.

**EXH3306** The requested mailbox is already in use.
Explanation: The requested mailbox is already in use by another process.
User Response: The mailbox client code must provide for this situation.

**EXH3307** The requested item is already in use.
Explanation: The requested item is already in use by another process.
User Response: The mailbox client code must provide for this situation.

**EXH3308** The requested item was not copied to the notebook.
Explanation: An error occurred whilst copying an item to a notebook.
User Response: The mailbox client code must provide for this situation.

**EXH3309** There are no items in the mailbox.
Explanation: A mailbox scan request was issued and no more items are left in the mailbox.
User Response: The mailbox client code must provide for this situation.

**EXH3310** There are no mailboxes available to allocate.
Explanation: A request was made to the mailbox server to allocate a new mailbox but there are no more available.
User Response: The mailbox client code must provide for this situation.

**EXH3319** The mailbox server detected an error in processing.
Explanation: An internal error occurred in the mailbox server.
User Response: Review the GSI log to determine the nature of the error, and report it to your service representative.
Directory Messages (3320-3399)

EXH3321 The specification of the directory entry is not complete.

Explanation: A directory entry consists of one main record and three index records. If a search finds an index record but cannot find the main record to which it points, this message is generated.

User Response: The directory database is corrupted. Obtain a program from your service representative to correct the database file.

EXH3322 The system could not find the specified directory entry.

Explanation: The directory entry criteria passed to the directory server function did not match any entry in the directory database.

User Response: Ensure that the criteria passed to the directory server function do match an existing function.

EXH3323 The directory server detected an error in processing.

Explanation: An internal error occurred in the directory server.

User Response: Review the GSI log to determine the nature of the error, and report it to your service representative.
3270 Emulator Messages (3400-3449)

**EXH3401** The 3270 emulator got a network error during listen. Return Code is: <number>

**Explanation:** The 3270 emulator detected a NetBIOS error while waiting for a request from a voice application.

**User Response:** Review preceding messages to determine the cause of the network error. See LAN Technical Reference, SC30-3587 for the NetBIOS return code.

**EXH3403** Could not connect to the network. LAN reset error is: <number>

**Explanation:** The 3270 terminal emulator detected a NETBIOS error when starting. This emulator session is unusable.

**User Response:** Review preceding messages to determine the cause of the error. The most likely cause of this error is running out of NetBIOS Sessions, Commands or Names resources.

Running program TMSCHKNB.EXE will show you how many of the above resource types you have at any given instant. When you have determined which resource you need more of, run LAPS configuration and allocate more. If you cannot allocate more, you must stop other applications running on the LAN to free up resources. (See LAN Technical Reference, SC30-3587 for the NetBIOS return code).

**EXH3404** The first request to the 3270 emulator must be to open.

**Explanation:** This is an internal error. The “open” or connect request must be the first request to the 3270 terminal emulator.

**User Response:** Report this problem to your service representative.

**EXH3405** The 3270 emulator got a network error during receive. Return Code is: <number>

**Explanation:** Whilst waiting for a request, a network error occurred. This may not be an error, but an indication that the requester terminated the session.

**User Response:** Review preceding messages to determine the cause of any errors. See LAN Technical Reference, SC30-3587 for the NetBIOS return code.

**EXH3406** Could not read from the host during the 3270 emulator session.

**Explanation:** The 3270 emulator encountered an error when receiving data from the host.

**User Response:** Review host communications messages and status to determine the cause of the error.

**EXH3407** The 3270 emulator got a network error during receive. Return Code is: <number>

**Explanation:** Whilst waiting for a request, a network error occurred. This may just be an indication that the requester terminated the session.

**User Response:** Review preceding messages to determine the cause of any errors. See LAN Technical Reference, SC30-3587 for the NetBIOS return code.

**EXH3408** This aid byte sent from requestor to 3270 emulator is not valid: <number>

**Explanation:** The “aid” or attention byte sent to the emulator was not valid. This may be due to sending a 5250 data stream to the 3270 emulator.

**User Response:** Ensure that all data streams sent to the emulator by the voice application are appropriate for the 3270.

**EXH3409** The system could not open 3270 emulator table file: <filename>.

**Explanation:** The 3270 emulator encountered an OS/2 file system error when reading file: VS3270MX.TBL.

**User Response:** Note the return code and report this problem to your service representative.

**EXH3410** The first request to the 3270 emulator must be to open.

**Explanation:** This is an internal error. The “open” or connect request must be the first request to the 3270 terminal emulator.

**User Response:** Report this problem to your service representative.

**EXH3411** Could not read the 3270 emulator table file. The Return Code is <number>.

**Explanation:** The 3270 emulator encountered an OS/2 file system error when reading file: VS3270MX.TBL.

**User Response:** Note the return code and report this problem to your service representative.

**EXH3413** Cannot open 3270 session with host. <text>

**Explanation:** This message may have been issued by either of two emulators - the PC-MUX (ARTIC) or the LUA, as follows.

PC-MUX <text> will read: “RTIC card: <number>”. The emulator could not establish communication with the Portmaster/Multiport adapter card with this number.
Chapter 3. DirectTalk/2 Messages

EXH3414 • EXH3421

**LUA**

<text> will read: "LUA name: <name>.
where <name> is the 8 character LUA name. The LUA name is the same as the 'Emulator Session Name'. Within DirectTalk/2 it is known as the session name, but within Communications Manager or PC 3270 it is known as the LUA Name.

**User Response:**

**PC-MUX**

Ensure that the Portmaster/Multiport hardware and software are properly installed and operational. Check that the configuration of the 3270 emulator is consistent with the Portmaster/Multiport hardware.

**LUA**

Check that the LUA name has been defined within the LUA feature configuration of Communications Manager/2 or PC3270.

---

EXH3414 ******* Emulator Started *******

**Explanation:** This message is logged to the emulation monitor to indicate that the 3270 emulator has started.

**User Response:** None. This is an informational message only.

---

EXH3415 Could not link to LAN support module; return code: <number>.

**Explanation:** The system could not find the LAN support module: TMSNET32.DLL.

**User Response:** Ensure that TMSNET32.DLL is installed in a directory that is specified in your LIBPATH statement in CONFIG.SYS. If the file is not in the DirectTalk/2 main directory, or the DLL sub-directory (if you chose to install DLLs in a separate sub-directory), you need to reinstall the product.

---

EXH3416 Keyboard locked for aid key: <text>

**Explanation:** The voice application has issued the Send_Keys_to_Scr action when the 3270 emulator keyboard is in the input inhibited state. This message identifies the particular aid key that encountered the keyboard locked state. This may be normal if it occurs occasionally due to a slow running host system.

**User Response:** If this message occurs many times, check your voice application. After issuing a Send_Keys_to_Scr action, the application should issue a Wait_Scr_Update which, in general, will result in the keyboard being unlocked by the host before another Send_Keys_to_Scr action is issued.

---

EXH3417 LU<number> is already in use

**Explanation:** The 3270 emulator could not establish a host session with the LU number shown, because the session is already being used by another application.

**User Response:** Check you have correctly configured the session and that you have no other programs currently running in your workstation that are using the Portmaster/Multiport adapter and software that may be using the same host session number.

---

EXH3418 LU<number> is inactive

**Explanation:** The 3270 emulator could not establish a host session with the LU number shown, because the session is not active.

**User Response:** Review host communication messages and status. Check with your network service representative that the host has attempted to activate the LU.

---

EXH3419 PU is not loaded

**Explanation:** The 3270 emulator could not establish communication with the host because the PU is not active.

**User Response:** Review host communication messages and status. Check with your network service representative that the host has attempted to activate the PU.

---

EXH3420 Card is not loaded

**Explanation:** The 3270 emulator could not establish communication with the host because the Portmaster/Multiport adapter card has not been initialized correctly.

**User Response:** Ensure that the Portmaster/Multiport hardware and software are properly installed and operational. Check that the configuration of the 3270 emulator is consistent with the Portmaster/Multiport hardware. Check that VSINIT.CMD contains the statement: PCMUX VSCOMM.NET.

---

EXH3421 Host communication link is not active

**Explanation:** The 3270 emulator could not establish communication with the host because the communication link is not active.

**User Response:** Ensure that the Portmaster/Multiport hardware and software are properly installed and operational. Check that the configuration of the 3270 emulator is consistent with the Portmaster/Multiport hardware:

- Ensure the card number matches the hardware setup (see Installation Guide).
• Ensure the cable block line number matches the port number into which the host link is plugged (see Installation Guide).

• If using a Portmaster/Multiport adapter with a selectable interface board, ensure that the Data communications interface type (RS232 or V35) is specified correctly for your host link (modem).

Check that the configuration of the 3270 emulator is consistent with the host communication definitions:

• Ensure the SNA polling address matches the value defined in the host VTAM definitions (see Installation Guide).

• Ensure the Data link encoding (NRZ or NRZI) matches the value defined in the host VTAM definitions (see Installation Guide).

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EXH3422 Invalid BIND received from host. 3270 Extended datastream not supported

**Explanation:** An incoming BIND from the host has the device query bit set which indicates that the VTAM definition for the LU which this application is using has the 3270 Extended Datastream attribute. This attribute is not supported by the emulator.

**User Response:** Contact your host system support personnel to change the VTAM LU definition or logmode for any sessions which this emulator will use so that 3270 Extended Datastream is not used.
EHLLAPI/ASCII Emulator Messages (3450-3469)

EXH3451 The system could not initialize the emulator. Write this down: <text>

Explanation: The emulator failed to initialize. This is an internal error. This message provides trace information useful to your service representative.

User Response: If the message includes “DOSALLOCSEG” your system may be short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

Request help from your service representative and pass on the information contained in this message to help them determine the cause of the failure.

EXH3452 Could not initialize the communications manager. Write this down: <text>

Explanation: The emulator failed to initialize the host communications software (either Communications Manager/2 or PC3270). This message provides trace information useful to your service representative.

User Response: Ensure that the host communications software is installed and correctly configured. Ensure that the number of DirectTalk/2 host sessions, and the session names, match the host communications software configuration. If you cannot determine what the problem is, report this problem to your service representative.

EXH3453 Could not connect to the network. LAN reset error is: <number>

Explanation: The host terminal emulator detected a NETBIOS error when starting. This emulator session is unusable.

User Response: Review preceding messages to determine the cause of the error. The most likely cause of this error is running out of NetBIOS Sessions, Commands or Names resources.

Running program TMSCHKNB.EXE will show you how many of the above resource types you have at any given instant. When you have determined which resource you need more of, run LAPS configuration and allocate more. If you cannot allocate more, you must stop other applications running on the LAN to free up resources.

EXH3454 ******** Emulator Started ********

Explanation: This message is logged to the emulation monitor to indicate that the emulator has started.

User Response: None. This is an informational message only.

EXH3455 Could not open a network session. LAN open error is: <number>

Explanation: An error occurred whilst attempting to establish a session between the voice application and the EHLLAPI emulator.

User Response: Review preceding messages to determine the cause of the error. See LAN Technical Reference, SC30-3587 for the LAN error.

EXH3456 The network session ended. The LAN receive error is: <number>

Explanation: Whilst waiting for a request, a network error occurred. This may just be an indication that the requester terminated the session.


EXH3457 The first request to the 3270 emulator must be to open.

Explanation: This is an internal error. The “open” or connect request must be the first request to the 3270 terminal emulator.

User Response: Report this problem to your service representative.

EXH3458 The network session ended. LAN send error is: <number>

Explanation: Whist attempting to send a response to the requester, a network error occurred. This may just be an indication that the requester ended the session.

User Response: Review preceding messages to determine the cause of the error.

EXH3459 The session identification specified was not the correct type.

Explanation: The emulation session specified by a voice application is of the incorrect type for this emulator. For example, the session name is configured as a 3270 terminal but the request has been made to the 5250 emulator, or the session name is configured as a 5250 terminal but the request has been made to the 3270 emulator.

User Response: Ensure that the DirectTalk/2 configuration matches the host communications software configuration. Note that the 3270 and 5250
sessions are assigned consecutively by DirectTalk/2 from the letter specified as the “Starting session short name” in the Terminal Emulation configuration. Ensure that the Emulator network name used by the voice application refers to the correct short session name as configured in the host communications software for the type of terminal required.

Note: You can verify the session short names assigned by DirectTalk/2 by browsing the file VS3270EH.CFG (for 3270 terminals) or VS5250EH.CFG (for 5250 terminals). The session short names are defined with the “SESSION=” parameter for each “TYPE=EMULATOR_START” keyword in these files.

EXH3460  This aid byte sent from requestor to 3270 emulator is not valid: <number>

Explanation: The “aid” or attention byte sent to the emulator was not valid. This may be due to sending a 5250 data stream to the 3270 emulator.

User Response: Ensure that all data streams sent to the emulator by the voice application are appropriate for the emulator type being used.

EXH3461  Could not open a session with the emulator. Write this down: <text>

Explanation: An error occurred whilst attempting to establish a session with the host communications software (either Communications Manager/2 or PC3270).

User Response: Ensure that the DirectTalk/2 configuration matches the host communications software configuration. Note that the 3270 and 5250 sessions are assigned consecutively by DirectTalk/2 from the letter specified as the “Starting session short name” in the Terminal Emulation configuration. Ensure that the host communications software is running and the host sessions are started.

Note: You can verify the session short names assigned by DirectTalk/2 by browsing the file VS3270EH.CFG (for 3270 terminals) or VS5250EH.CFG (for 5250 terminals). The session short names are defined with the “SESSION=” parameter for each “TYPE=EMULATOR_START” keyword in these files.

EXH3462  There are no terminals defined.

Explanation: This is an internal error. An attempt was made to start the 5250 or 3270 EHLLAPI emulator with an invalid emulator name.

User Response: Report this problem to your service representative.

EXH3463  Request to the internal interface failed. EHLLAPI error is: <number>

Explanation: An error was detected on the EHLLAPI interface with the host communications software (either Communications Manager/2 or PC3270).

User Response: Report this problem to your service representative and provide them with the information contained in this message.

EXH3464  Could not open a session because the short name is not valid.

Explanation: An attempt was made to establish a host session with the host communications software (either Communications Manager/2 or PC3270) using an invalid session short name.

User Response: Ensure that the DirectTalk/2 configuration matches the host communications software configuration. Note that the 3270 and 5250 sessions are assigned consecutively by DirectTalk/2 from the letter specified as the “Starting session short name” in the Terminal Emulation configuration. Ensure that all the sessions defined in DirectTalk/2 have a corresponding session short name defined to the host communications software.

Note: You can verify the session short names assigned by DirectTalk/2 by browsing the file VS3270EH.CFG (for 3270 terminals) or VS5250EH.CFG (for 5250 terminals). The session short names are defined with the “SESSION=” parameter for each “TYPE=EMULATOR_START” keyword in these files.

EXH3465  Could not link to LAN support module; return code: <number>.

Explanation: The system could not find the LAN support module: TMSNET32.DLL.

User Response: Ensure that TMSNET32.DLL is installed in a directory that is specified in your LIBPATH statement in CONFIG.SYS. If the file is not in the DirectTalk/2 directory, or the DLL sub-directory if you chose to install DLLs in a separate sub-directory, you need to reinstall the product.
Executor Messages Part 2
(3470-3499)

EXH3470  Unexpected response from VR hardware: <text>
Explanation: The voice recognition hardware is not responding as expected.
User Response: Retry the operation. If it fails again, check that DirectTalk/2 Voice Recognition is installed correctly. Ensure the correct vocabulary templates have been set up.

EXH3471  Internal processing error: <text>
Explanation: There is a problem with the system installation or setup.
User Response: Report this problem to your service representative.

EXH3472  You must specify a value for this parameter: <text>
Explanation: The parameter specified is a required parameter.
User Response: Define a value for the parameter.

EXH3473  You must use a value from 1 to 32 for: <text>
Explanation: You defined a value for the specified parameter, but the value was not between 1 and 32.
User Response: Define a value for the specified parameter which is between 1 and 32.

EXH3474  Minimum words must be less than or equal to Maximum words
Explanation: The value you specified for the Minimum words parameter is greater than the value you specified for the Maximum words parameter.
User Response: Specify a Minimum words parameter which is less than or equal to the Maximum words parameter.

EXH3475  The value of this parameter is not a valid vocabulary set: <text>
Explanation: You specified an invalid vocabulary set. See IBM CallPath DirectTalk/2: National Language Information, SC33-1865 for a list of valid vocabulary sets.
User Response: Specify a valid vocabulary set.

EXH3477  001 or more of the specified parameter variables did not exist.
Explanation: When you completed the function details for this function using the ADSI script database you specified DT/2 variable names to hold values for parameters for that function. One or more of these variables does not exist or has not been set.
User Response: Ensure all of the variables specified in this function exist and have been set to some value.

EXH3478  Could not find ADSI script <name>
Explanation: You specified an ADSI script name but that script could not be found in the current, common or system ADSI databases.
User Response: Ensure that the script exists in the current, common or system application.

EXH3479  Could not find function <text>
Explanation: You specified an ADSI function to be executed but that function was not found within the specified script.
User Response: Check that the function name you specified is contained within the script you specified.

EXH3480  There is no ADSI resource available.
Explanation: All available ADSI resource is currently being used.
User Response: Ensure that the ADSI feature has been enabled, otherwise wait for some ADSI resource to be freed and become available.

EXH3481  Permission denied to download FDM script.
Explanation: When downloading an FDM script to an ADSI phone, permission must be granted by the recipient. In this case the recipient has refused to allow the FDM script to be downloaded to their phone.
User Response: No response is required.

EXH3482  Unable to download ADSI data to telephone.
Explanation: An attempt was made to download ADSI data to a telephone but the attempt failed. It may be that an attempt was made to download to a non-ADSI telephone, or the caller may have hung up.
User Response: Check that the telephone is ADSI and that the caller hasn't hung up.
EXH3483 You must specify a result variable name to perform Get_ADSI

Explanation: You have not specified a variable to hold the result of the Get_ADSI action.

User Response: Specify a result variable.

EXH3484 You have not specified enough parameters to perform Get_ADSI

Explanation: You have not specified all of the parameters required to execute the Get_ADSI action.

User Response: Specify all of the required parameters.

EXH3485 You must specify a duration greater than 0.

Explanation: You specified a duration of time to wait for ADSI data but the duration you specified was less than or equal to 0.

User Response: Specify a duration greater than 0.

EXH3486 You must specify a value greater than 0 for maximum characters.

Explanation: The maximum characters parameter defines the maximum number of characters you want to receive from the ADSI telephone. The value you specified was less than or equal to 0.

User Response: Specify a maximum characters parameter greater than 0.

EXH3487 You must specify a script name.

Explanation: You tried to download an ADSI script but you did not specify which script to download.

User Response: Specify a script name to download to the ADSI telephone.

EXH3488 Function name variable, if specified, must be set to a value.

Explanation: You have specified a variable to hold the function name but have not put a value into it.

User Response: Put the name of the function to be downloaded into the function name variable.

EXH3489 Transmission mode must be data or voice.

Explanation: You have specified a transmission mode which is neither data nor voice.

User Response: Set the transmission mode to either data or voice.

EXH3490 Function parameter details are not complete.

Explanation: You have not completed the parameter details for the ADSI function you are attempting to download. All of the parameter details (for example, type and values) must be complete before the function can be downloaded.

User Response: Complete the functions parameter details using the ADSI script database.

EXH3491 Error detected when transmitting ADSI data.

Explanation: A transmission error occurred when attempting to download ADSI data.

User Response: Retry the transmission.

EXH3492 Unable to format ADSI parameters.

Explanation: One or more of an ADSI function's parameters could not be formatted.

User Response: Check that the format types assigned to parameters in the ADSI script database are valid given the values of the parameters.

EXH3493 Parameter <text> does not exist.

Explanation: You specified a variable name to hold the value of an ADSI function parameter but the variable you specified either does not exist or has not been assigned a value.

User Response: Ensure that the variable specified exists and has been set to a value.

EXH3494 No memory left to format parameters.

Explanation: The system ran out of memory whilst formatting parameters.

User Response: Check that enough storage is available. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH3495 Warning: Unable to format parameter <text>.

Explanation: An attempt was made to format the parameter shown to the specified type but the attempt failed. The parameter will be left unformatted.

User Response: Check that it is valid for the parameter to be formatted to the specified type.
Configuration Messages
(3500-3599)

EXH3502 The system could not open communication feature output file: <filename>

Explanation: An unrecoverable error was encountered when trying to access the specified file. This could be due to the file being set as read only or another OS/2 process may already have the file open.

User Response: Ensure the file is not read only. Use the OS/2 ATTRIB command to check the file status and remove the read only state if it is set and retry configuration.

Ensure that no other program is accessing the file, for example an editor in another OS/2 session.

EXH3507 The system could not write file: <filename>

Explanation: An unrecoverable error was encountered when trying to write to the specified file. This could be due to the file being set as read only or the drive, on which the file is to be written, is full.

User Response: Ensure the file is not read only. Use the OS/2 ATTRIB command to check the file status and remove the read only state if it is set and retry configuration.

Ensure that there is enough space on the OS/2 drive containing the DirectTalk/2 directory.

EXH3544 Configuration file: <filename> was backed up to file: <filename>

Explanation: Information message: DirectTalk/2 has automatically saved the previous version of the configuration file before overwriting it with the new configuration information.

User Response: None.
**Telephony Server Messages (3600-3999)**

**EXH3600** Message language parameter `<text>` too long, using `<text>`.

**Explanation:** The message language passed to the Telephony Server on initialization is invalid. The system will use the default shown instead.

**User Response:** Try reconfiguring or reinstalling the system.

**EXH3601** Configuration file `<filename>` name too long. Max is `<number>` chars.

**Explanation:** An invalid configuration file name has been passed to the Telephony Server on initialization. The standard name is VSTS.CFG.

**User Response:** Try reconfiguring or reinstalling the system. Check any changes made by hand to SSGSI.CFG.

**EXH3602** Telephony Server initialization using `<filename>` starting.

**Explanation:** Information message.

**User Response:** No response is required.

**EXH3603** Telephony Server initialization error - error code `<number>`.

**Explanation:** The Telephony Server failed to initialize. The system will not operate.

**User Response:** Check the meaning of the error code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. Review preceding error messages to determine the cause of the error.

**EXH3604** Telephony Server initialization failed - error code `<number>`.

**Explanation:** The Telephony Server failed to initialize. The system will not operate.

**User Response:** Review preceding messages to determine the cause of the error.

**EXH3605** Telephony Server start failed - DLL `<name>`, error code `<number>`.

**Explanation:** A sub-component of the Telephony Server failed to start. The component is indicated by the DLL name specified.

**User Response:** Check the meaning of the error code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. The sub-component may have been incorrectly installed or configured, so try reinstalling or configuring the sub-component.

**EXH3606** Telephony Server dump failed - DLL `<name>`, error code `<number>`.

**Explanation:** A sub-component of the Telephony Server was not able to complete a diagnostic dump request.

**User Response:** Check the meaning of the error code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. Ensure that the component is correctly installed.

**EXH3607** Invalid GSI request to TS, fun `<number>`.

**Explanation:** The Telephony Server has received a request it cannot handle. The function indicates the sub-component that should perform the request.

**User Response:** Ensure that the Telephony Server is correctly installed, and is at the same release and CSD level as the system making the request.

**EXH3608** Request to TS component `<number>` which is not installed.

**Explanation:** An application has attempted to make a request on one of the optional features that has not been installed.

**User Response:** Check the application to see which feature is being requested, then ensure that that feature is installed and fully operational, or if necessary obtain and install the feature.

**EXH3609** TS request data length `<number>` bytes below minimum size.

**Explanation:** Internal error, an invalid command request message has been received by the Telephony Server.

**User Response:** Ensure that the Telephony Server is correctly installed, and is at the correct release and CSD level. Rerun setup.

**EXH3610** TS response data length `<number>` bytes below minimum size.

**Explanation:** A sub-component of the Telephony Server has generated an invalid command response.

**User Response:** Ensure that any system updates have been fully applied.
EXH3611 TS request to component <number> with non-0 spare fields.

**Explanation:** A command request message with invalid data has been received by the Telephony Server.

**User Response:** Ensure that any system updates have been fully applied. If a remote Telephony Server is used, check that the code level is the same as the executor.

EXH3612 TS request on session <number> to component <number> which is not attached.

**Explanation:** A command request message received by the Telephony Server is to a sub-component that has not been attached to this session. Sub-component attachment is automatically performed by the Telephony Server APIs. This is therefore a system error.

**User Response:** Report this problem to your service representative.

EXH3613 TS internal error at - <number>, code <number>.

**Explanation:** An unexpected condition has been detected by the GSI IF sub-component of the Telephony Server.

**User Response:** Report this problem to your service representative.

EXH3614 TS reply (<number> bytes) too long for response data buffer (max=<number>).

**Explanation:** A Telephony Server sub-component has generated a command response message that is too large to return to the application.

**User Response:** Check that any system updates have been completely applied.

EXH3615 TS specified instance <number> is not attached to session <number>.

**Explanation:** A command request message received by the Telephony Server is to a component instance that is not attached to this session.

**User Response:** Report this problem to your service representative.

EXH3616 TS unable to obtain number of installed lines.

**Explanation:** The Telephony Server is unable to initialize because it cannot read the configuration information specifying the system line size.

**User Response:** Make sure the system has been fully installed, and completely configured. For a demonstration system, ensure that the usage time has not expired.

EXH3617 TS number of sessions (<number>) is greater than installed lines (<number>)

**Explanation:** The system has been configured for more lines than were purchased.

**User Response:** Rerun the Telephony Server configuration.

EXH3618 Telephony Server Terminating.

**Explanation:** Information message.

**User Response:** None.

EXH3619 Telephony Server Special - <text>

**Explanation:** Information message indicating a special early release, test, or diagnostic version of a Telephony Server sub-component.

**User Response:** You should normally only use a special version while testing code or analyzing problems. Replace the special version by a formal PTF, CSD, or system release once one becomes available.

EXH3620 TS internal error allocating memory for <text> (<number> bytes)

**Explanation:** There was a memory allocation error.

**User Response:** Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH3621 TS Initialization for <number> sessions started.

**Explanation:** Informational system initialization message.

**User Response:** None.

EXH3622 TS internal error at - <number>, code <number>.

**Explanation:** An unexpected condition has been detected by the initialization component of the Telephony Server.

**User Response:** Check the meaning of the error code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. Rerun Telephony Server configuration. Ensure any changes you have made to VSTS.CFG are correct.
EXH3628  TS cannot get identity from \texttt{<name>}, \texttt{(error <number>)}.

**Explanation:** The Telephony Server sub-component indicated is not supplying required identification information.

**User Response:** Check that the sub-component is correctly installed.

EXH3629  TS \texttt{<name>} TS\_Init returned error \texttt{<number>}.

**Explanation:** The telephony Server sub-component indicated failed to initialize.

**User Response:** Check the meaning of the error code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. Check the preceding messages that describe the error. Check that the indicated sub-component is correctly installed and configured.

EXH3630  TS Invalid component \texttt{<name>} given in config statement \texttt{<number>}.

**Explanation:** A Telephony Server sub-component indicated by \texttt{TYPE=} statement in VSTS.CFG is not recognized.

**User Response:** If the component name is valid, check that the Telephony Server has been correctly installed. Rerun Telephony Server configuration.

EXH3631  TS multiple \texttt{text} statements in config for component \texttt{<name>}.

**Explanation:** The VSTS.CFG file is corrupted.

**User Response:** Check for the error in VSTS.CFG. Ensure that any changes you have made to this file are correct. If the error persists, delete VSTS.CFG, and reconfigure the Telephony Server.

EXH3632  TS \texttt{QUANTITY=}\texttt{<number>} would exceed number of lines. (previous \texttt{num=}<number>)

**Explanation:** The \texttt{TYPE=}\texttt{INF} statement in VSTS.CFG indicates the maximum quantity of each sub-component expected. The actual \texttt{TYPE=}\texttt{ statements for the component exceed this number.

**User Response:** Reconfigure the Telephony Server. If there are still problems, delete VSTS.CFG and reconfigure again.

EXH3633  TS DLL \texttt{<name>} returned type \texttt{<number>} which does not match type of component ...

**Explanation:** A Telephony Server sub-component is returning invalid identification or operating data. This message occurs with message EXH3634.

**User Response:** Check that the indicated component DLL is correctly installed, and has been updated if necessary.

EXH3634  ...\texttt{<name>} which is set in configuration file (correct type=\texttt{<number>})

**Explanation:** This message occurs with message EXH3633.

**User Response:** See the description of EXH3633.

EXH3635  TS unable to find/load DLL \texttt{<name>}, error \texttt{<number>}

**Explanation:** The Telephony Server configuration file indicates the DLL required for each sub-component. This DLL is either missing or has been corrupted.

**User Response:** Check the meaning of the error code in Chapter 4, “DirectTalk/2 Return Codes” on page 4-1. Check that the DLL is in the system DLL directory. If not, load it. If it is, reinstall it in case it has been corrupted.

EXH3636  TS DLL \texttt{<name>} does not have required entry point \texttt{<text>}

**Explanation:** A sub-component DLL does not have the expected entry points.

**User Response:** Check there is not another DLL with this name earlier in the LIBPATH search directories than the DirectTalk/2 DLL directory.

EXH3637  TS Invalid range in CHANNEL= \texttt{<number>} \texttt{TO} \texttt{<number>}

**Explanation:** The CHANNEL statements in VSTS.CFG indicate sub-component instance (channel) ranges that are configured as groups. This error occurs if the range is invalid, that is, too large for the number of instances.

**User Response:** Rerun Telephony Server configuration.

EXH3638  TS Channel \texttt{<text>} set by multiple CHANNEL= statements.

**Explanation:** The CHANNEL statements in VSTS.CFG indicate sub-component instance (channel) ranges that are configured as groups. This error indicates that an instance is being configured in multiple groups.
User Response: Rerun Telephony Server configuration.

**EXH3639** TS multiple <text> parameter setting in CHANNEL= statement.

Explanation: The configuration file VSTS.CFG is invalid.

User Response: Rerun Telephony Server configuration.

**EXH3640** TS DLL name <name> contains directory information.

Explanation: The Telephony Server DLL is specified in VSTS.CFG. It must be specified as file name only.

User Response: Assuming that you have modified VSTS.CFG, correct the line, ensuring that the DLL is in the LIBPATH search directories.

**EXH3641** TS DLL name does not have extension .DLL (<name>).

Explanation: Only code files with .DLL extension may be used as Telephony Server sub-components.

User Response: Correct the DLL file name, and the VSTS.CFG statement.

**EXH3642** TS Configuration includes feature <text>, which is not installed.

Explanation: The VSTS.CFG Telephony Server configuration file has a feature configured that has not been installed on this system.

User Response: Purchase and install the feature if it is required. Delete VSTS.CFG, and rerun Telephony Server configuration.

**EXH3643** TS Component <name>, channel <number> cannot be redefined.

Explanation: The instances (channels) of the named Telephony Server sub-component overlap in VSTS.CFG.

User Response: Delete VSTS.CFG, and rerun Telephony Server configuration.

**EXH3644** TS Component <name>, channel start + quantity <number> exceeds line size.

Explanation: The TYPE=INF statement in VSTS.CFG indicates the maximum quantity of each sub-component expected. The actual TYPE= statements for the named component exceed this number.

User Response: Reconfigure the Telephony Server. If there are still problems, delete VSTS.CFG and reconfigure again.

**EXH3645** TS Internal error reading tone definitions (<text>).

Explanation: An unexpected condition was detected while reading the tone definition statements from VSTS.CFG.

User Response: Rerun Setup to create a new VSTS.CFG file.

If you have chosen to hand-edit the file after running Setup, check that the tone definitions have been entered correctly. Check that the TYPE= TONE_DET statement is terminated by a semi-colon, and that each TONECLASS= substatement is terminated by a colon. Also check that there are no other colons or semicolons within the statement.

**EXH3646** TS Invalid TONECLASS specified (<text>).

Explanation: The TONECLASS shown is not valid.

User Response: Tones are defined in VSTS.CFG. Check for the TONECLASS given, and correct it. Valid TONECLASS values are given in the installation and configuration manuals.

**EXH3647** TS Invalid TONETYPE specified (<text>).

Explanation: The TONETYPE shown is not valid.

User Response: Tones are defined in VSTS.CFG. Check for the TONETYPE given, and correct it. Valid TONETYPE values are given in the installation and configuration manuals.

**EXH3648** TS Required tone definition value missing (<text>).

Explanation: A tone definition in VSTS.CFG does not have a required value specified.

User Response: Edit the tone definition in VSTS.CFG, so that they are correct.

**EXH3649** TS Invalid tone definition value. Param=<text> Values=<text>

Explanation: A tone definition in VSTS.CFG has the invalid value for a parameter.

User Response: Check the valid parameter value ranges, and correct the tone definition in VSTS.CFG.

**EXH3650** TS Duplicate tone ID specified (<text>).

Explanation: Tones specified in VSTS.CFG do not have the required unique IDs.

User Response: Edit the tone definition in VSTS.CFG to make the IDs unique.
EXH3651 TS Required parameter <text> missing from configuration file.

Explanation: The parameter indicated is not included in the VSTS.CFG parameter file.
User Response: Add the parameter to the VSTS.CFG file, or Rerun Telephony Server configuration.

EXH3652 TS Parameter <text> missing from configuration file.

Explanation: The parameter indicated is not included in the VSTS.CFG parameter file.
User Response: Add the parameter to the VSTS.CFG file, or Rerun Telephony Server configuration.

EXH3653 TS Invalid CHAN= upper range, <number> specified, limit = <number>.

Explanation: A CHAN= definition within VSTS.CFG is too high.
User Response: Correct the CHAN= definition in the VSTS.CFG file, or Rerun Telephony Server configuration.

EXH3654 TS Invalid FIXED_ROUTING NIF_RANGE <number> - <number>.

Explanation: You have defined a Telephony Server sub-component in DirectTalk/2 Setup as being linked to an invalid set of Network Interface instances (channels).
User Response: Rerun Setup and set NIF_RANGE to a valid value (Setup will choose a valid value and offer it to you as the default).

EXH3655 TS Internal error reading component quantities <text>.

Explanation: There is an error within the TYPE=INF statement in VSTS.CFG.
User Response: Rerun Telephony Server configuration.

EXH3655 CS Init with first instance (number) non-zero.

Explanation: The Control Server sub-component of the Telephony Server should only be initialized once for all its instances, starting at instance zero. The VSTS.CFG file controls initialization.
User Response: Rerun Telephony Server configuration.

EXH3675 CS Memory allocation failed for <text>, (number).

Explanation: There was a memory allocation error.
User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH3678 CS Unable to start thread for inst <number>.

Explanation: The Telephony Server Control Server sub-component was unable to start an instance thread.
User Response: Check that the OS/2 CONFIG.SYS file does not limit the number of threads available to a process. (Check the THREAD= statement.)

EXH3679 CS Message error <number>.

Explanation: An error occurred getting a Telephony Server inter-instance control message.
User Response: Report this problem to your service representative.

EXH3680 CS Invalid function (<number>) requested.

Explanation: The Control Server component received a request type it does not recognize.
User Response: Ensure that system updates involving the Control Server (TSCS.DLL) have been correctly installed.

EXH3681 CS Invalid parameter value in <text> command, (param <number>).

Explanation: A command request message to the Control Server has an invalid value for the specified parameter.
User Response: Ensure that system updates involving the Control Server (TSCS.DLL) have been correctly installed.
EXH3682  CS Function <text>, required element <text> missing.

Explanation: A command request message to the Telephony Server Control Server is missing the specified data.

User Response: Ensure that system updates involving the Control Server (TSCS.DLL) have been correctly installed.

EXH3683  CS Function <text>, duplicate param <number>.

Explanation: A command request message to the Telephony Server Control Server has duplicate data.

User Response: Report this problem to your service representative.

EXH3684  CS Detach device <number>, inst <number> - no instances attached.

Explanation: The Telephony Server Control Server has received a request to detach the specified sub-component instance from a session. However, no instances of that component type are currently attached.

User Response: Preceding log messages may indicate why this situation has occurred. Check the application.

EXH3685  CS Detach device <number>, inst <number> - instance not attached.

Explanation: The Telephony Server Control Server has received a request to detach the specified sub-component instance from a session. However, a different instance of that component type is currently attached.

User Response: Check the application.

EXH3686  CS Device <text> set inoperable by <name>.

Explanation: Information message. The Control Server sub-component of the Telephony Server has set an instance of the specified device inoperable. The message also names which sub-component detected that the device had gone inoperable. Preceding messages will indicate why the device is thought to be inoperable. A device is normally determined as being inoperable if a message request is sent to it and no response is received within a set time period.

User Response: Act on preceding messages.

EXH3687  CS Device <text> set operable by <name>.

Explanation: A device has been reset, and made operable again.

User Response: None.

EXH3720  Missing voice segment <name> file <filename>

Explanation: A request has been made to play the named voice segment, but this segment does not exist in the file shown.

User Response: Check the application for use of incorrect segment names, or record the segment if it is required.

EXH3770  NIF Internal error at - <text>, code <number>.

Explanation: NIF server internal message handling system error. The first data item given in the message indicates where in the server the error occurred, the second gives the return code.

User Response: Report this problem to your service representative.

EXH3771  NIF Message error <number>.

Explanation: The NIF server is unable to open a message queue. The number shown is the TLDS_Open function return code.

User Response: Report this problem to your service representative.

EXH3772  NIF Invalid function (<number>) requested.

Explanation: Unknown NIF function request. The number shown is the function code (funno).

User Response: Report this problem to your service representative.

EXH3773  NIF Unable to open device <name>, code <number>.

Explanation: Unable to open the named Dialogic device. The code given is the DialogicError function return code.

User Response: Check that the Dialogic and DT/2 configuration matches the hardware.
EXH3774  NIF Unable to set parameter <name>, code <number>.

Explanation: Unable to set the named Dialogic parameter. The code given is the DialogicError function return code.

User Response: Check the telephony server configuration. Ensure that the correct DirectTalk/2 country parameter files have been installed (especially if a ServicePak has been added).

EXH3775  NIF Unable to perform Hookflash on E1 line.

Explanation: Hookflash request (hookflash character as first character in a dial string) is not supported on E1 network connections.

User Response: Remove the hookflash request from the application.

EXH3776  NIF Wait_for_Call ringing check error.

Explanation: Next ring event not detected within 10 seconds (T1 only). Either a protocol error, or the user has abandoned a call after it has been detected but before it is answered.

User Response: Check that the telephony server configuration matches T1 trunk configuration. Modify the application to reduce the 'number of rings' in the Wait_for_call action.

EXH3777  NIF Line <number> Answer m/c detect not available without Enhanced CPA.

Explanation: Positive answer machine detection is not available when Standard call progress analysis is selected for the channel.

User Response: Change the telephony server channel parameter 'Type of Call Progress' to 'Enhanced' or change 'Intercept Flag' parameter to other than 'PAMD' or 'PAMD & SIT Wait'.

EXH3778  NIF Intercept flag changed from <text> to <text>.

Explanation: Information message. The selected value for channel parameter 'Intercept Flag' is being changed.

User Response: Accept the override, or reconfigure the value selected for channel parameter 'Intercept Flag'.

EXH3779  NIF Dialogic Analog Place Calls being logged to <filename>.

Explanation: Analog Place_a_calls are being logged to the trace file shown (LOG_PLACECALL specified in NIF section of VSTS.CFG configuration file).

User Response: Accept tracing to the named file or remove the LOG_PLACECALL statement from the VSTS.CFG configuration file.

EXH3780  NIF Dialogic T1 Place Calls being logged to <filename>.

Explanation: T1 Place_a_calls are being logged to the trace file shown (LOG_PLACECALL specified in NIF section of VSTS.CFG configuration file).

User Response: Accept tracing to named file or remove LOG_PLACECALL statement from VSTS.CFG configuration file.

EXH3781  NIF Aculab E1 Place Calls being logged to <filename>.

Explanation: E1 Place_a_calls are being logged to the trace file shown (LOG_PLACECALL specified in NIF section of VSTS.CFG configuration file).

User Response: Accept tracing to named file or remove LOG_PLACECALL statement from VSTS.CFG configuration file.

EXH3782  NIF <text> Tone, id <text>, may not be a frequency type - tone ignored.

Explanation: Neither SINGLE_FREQUENCY nor DUAL_FREQUENCY tone type is allowed in a hangup tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the tone type definition (in VSTS.CFG configuration file) to be one of; SINGLE_EDGE, DUAL_EDGE, SINGLE_DURATION, DUAL_DURATION, SINGLE_CADENCE, or DUAL_CADENCE.

EXH3783  NIF <text> Tone, id <text>, frequency 1 is not valid - tone ignored.

Explanation: The first frequency value for a tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the FREQ_1 value of the tone definition (in VSTS.CFG configuration file) to be within the range of 300 Hz and 3000 Hz.
EXH3784  NIF <text> Tone, id <text>, frequency 1 deviation is not valid - tone ignored.

Explanation: The first frequency deviation value for a tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the FREQ_DEV_1 value of the tone definition (in VSTS.CFG configuration file) so that FREQ_1 minus FREQ_DEV_1 is not less than 270 Hz, nor FREQ_1 plus FREQ_DEV_1 greater than 3100 Hz, nor FREQ_1 less than or equal to FREQ_DEV_1.

EXH3785  NIF <text> Tone, id <text>, frequency 2 is not valid - tone ignored.

Explanation: The second frequency value for a tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the FREQ_2 value of the tone definition (in VSTS.CFG configuration file) to be within the range of 300 Hz and 3000 Hz.

EXH3786  NIF <text> Tone, id <text>, frequency 2 deviation is not valid - tone ignored.

Explanation: The second frequency deviation value for a tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the FREQ_DEV_2 value of the tone definition (in VSTS.CFG configuration file) so that FREQ_2 minus FREQ_DEV_2 is not less than 270 Hz, nor FREQ_2 plus FREQ_DEV_2 greater than 3100 Hz, nor FREQ_2 less than or equal to FREQ_DEV_2.

EXH3787  NIF <text> Tone, id <text>, on time is not valid - tone ignored.

Explanation: The On Time value for a duration or cadence tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the ON_TIME value of the tone definition (in VSTS.CFG configuration file) to be in the range of 3 and 10 000.

EXH3788  NIF <text> Tone, id <text>, on time deviation is not valid - tone ignored.

Explanation: The On Time deviation value for a tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the ON_TIME_DEV value of the tone definition (in VSTS.CFG configuration file) so that ON_TIME minus ON_TIME_DEV is not less than 3, nor ON_TIME plus ON_TIME_DEV greater than 10 000, nor ON_TIME less than or equal to ON_TIME_DEV.

EXH3789  NIF <text> Tone, id <text>, off time is not valid - tone ignored.

Explanation: The Off Time value for a cadence tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the OFF_TIME value of the tone definition (in VSTS.CFG configuration file) to be in the range of 3 and 10 000.

EXH3790  NIF <text> Tone, id <text>, off time deviation is not valid - tone ignored.

Explanation: The Off Time deviation value for a tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the OFF_TIME_DEV value of the tone definition (in VSTS.CFG configuration file) so that OFF_TIME minus OFF_TIME_DEV is not less than 3, nor OFF_TIME plus OFF_TIME_DEV greater than 10 000, nor OFF_TIME less than or equal to OFF_TIME_DEV.

EXH3791  NIF <text> Tone, id <text>, repetitions is not valid - tone ignored.

Explanation: The repetitions value for a cadence tone definition is out of range. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the REPETITIONS value of the tone definition (in VSTS.CFG configuration file) to be in the range of 1 and 1000.

EXH3792  NIF <text> Tone, id <text>, should be a frequency type - tone ignored.

Explanation: The tone type must be frequency in a modify default dial tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the modify default dial tone definition (in VSTS.CFG configuration file) to be either SINGLE_FREQUENCY or DUAL_FREQUENCY.

EXH3793  NIF <text> Tone, id <text>, has an invalid id - tone ignored.

Explanation: The ID of dial tone type definition is invalid. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the ID in the dial tone definition (in VSTS.CFG configuration file) to be one of DTONEL, DTONEI, or DTONEX.
EXH3794 NIF <text> Tone, id <text>, should have a cadence type - tone ignored.

Explanation: The Tone type must be cadence in a modify default busy tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the modify default busy tone definition (in VSTS.CFG configuration file) to be either SINGLE_CADENCE or DUAL_CADENCE.

EXH3795 NIF <text> Tone, id <text>, may not be a frequency type - tone ignored.

Explanation: The Tone type must not be frequency in a new busy tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the new busy tone definition (in VSTS.CFG configuration file) to be other than SINGLE_FREQUENCY or DUAL_FREQUENCY.

EXH3796 NIF <text> Tone, id <text>, should have a cadence type - tone ignored.

Explanation: The tone type must be cadence in a modify default ringback tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the modify default ringback tone definition (in VSTS.CFG configuration file) to be either SINGLE_CADENCE or DUAL_CADENCE.

EXH3797 NIF <text> Tone, id <text>, may not be a frequency type - tone ignored.

Explanation: The tone type must not be frequency in a new ringback tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the new ringback tone definition (in VSTS.CFG configuration file) to be other than SINGLE_FREQUENCY or DUAL_FREQUENCY.

EXH3798 NIF <text> Tone, id <text>, should have a frequency type - tone ignored.

Explanation: The tone type must be frequency in a modify default FAX tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the modify default FAX tone definition (in VSTS.CFG configuration file) to be either SINGLE_FREQUENCY or DUAL_FREQUENCY.

EXH3799 NIF <text> Tone, id <text>, may not be a frequency type - tone ignored.

Explanation: The tone type must not be frequency in a new FAX tone definition. The Tone shown is the tone class type, and the id is the user defined tone_id.

User Response: Change the TONETYPE in the new FAX tone definition (in VSTS.CFG configuration file) to be other than SINGLE_FREQUENCY or DUAL_FREQUENCY.

EXH3800 NIF No response from switch to local hangup, line <number> (RC=<number>).

Explanation: The remote switch has failed to respond to an application hangup of an active call within a timeout period (T1 only). Parameter 1 = line number, parameter 2 = WaitForHang function return code.

User Response: Check that telephony server channel parameter ‘Wait for Hangup Ack Time’ value is greater than the worst case response time for switch.

EXH3801 NIF Place_Call Actions on line <number> are being Recorded using line <number>.

Explanation: Information message. The call setup portion of a Place_a_call action is being recorded on another line. The first line number shown is the line being recorded, the second is the line being used for recording.

User Response: Accept that diagnostic recording continues, or remove DIAG_RECORD statement from NIF section of VSTS.CFG configuration file.

EXH3802 NIF DIAG_RECORD= parameter <text> is invalid.

Explanation: The parameter supplied in the DIAG_RECORD statement (in the VSTS.CFG configuration file) is invalid.

User Response: Correct the parameter value (up to 3) in the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

EXH3803 NIF DIAG_RECORD initialized, recording using line <number>.

Explanation: Information message. A general diagnostic recording has been initialized for the line shown, which is now dedicated to it.

User Response: Accept that any general diagnostic recording is done on the dedicated line or remove the DIAG_RECORD statement from the NIF section of the VSTS.CFG configuration file.
**EXH3804** NIF DIAG_RECORD out of range value <number> for recorder line.

**Explanation:** The line number specified for diagnostic recording is greater than the number of installed lines.

**User Response:** Change the line number (first parameter) in the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

**EXH3805** NIF DIAG_RECORD out of range value <number> for place call line.

**Explanation:** The line number specified to be recorded in a diagnostic recording is greater than the number of installed lines.

**User Response:** Change the line number (second parameter) in the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

**EXH3806** NIF DIAG_RECORD line <number> specified for recorder and recorded line.

**Explanation:** The same line number has been specified for both lines in a Place_a_call diagnostic recording.

**User Response:** Change either the recording or recorded line number (first and second parameters) in the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

**EXH3807** NIF Diagnostic recording of line <number> using line <number> started.

**Explanation:** Information message. A diagnostic recording has started. The first line number shown is the line being recorded, the second is the line being used for recording.

**User Response:** Accept that diagnostic recording continues or remove the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

**EXH3808** NIF Place call recording complete. File <filename>.

**Explanation:** Information message. A Place_a_call diagnostic recording has ended. The file shown contains the recording.

**User Response:** Accept that diagnostic recording continues for subsequent place_a_call actions or remove the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

**EXH3809** NIF Diagnostic recording stopped. File <filename>.

**Explanation:** Information message. A general diagnostic recording has ended. The file shown contains the recording.

**User Response:** Accept that general diagnostic recording remains enabled or remove the DIAG_RECORD statement in the NIF section of the VSTS.CFG configuration file.

**EXH3810** NIF Error reading template file (RC=<number>).

**Explanation:** Error reading template modification file (VSTSTPLT.CFG)

**User Response:** Check the template modification file and the syntax in the file (VSTSTPLT.CFG).

**EXH3811** NIF More than one <number> parameter.

**Explanation:** More than one parameter is specified in the parameter statement in the modification file for the template number shown.

**User Response:** Correct the parameter statement in the template modification file (VSTSTPLT.CFG)

**EXH3812** NIF <number> is not numeric.

**Explanation:** The Parameter value is not a number in the parameter statement in the modification file for the template number shown.

**User Response:** Correct the parameter statement in the template modification file (VSTSTPLT.CFG)

**EXH3813** NIF No TEMPLATE parameter found in <text>.

**Explanation:** No template parameter is specified in the template modification file at the section statement shown.

**User Response:** Add a TEMPLATE statement to the qualification type section in the template modification file (VSTSTPLT.CFG)

**EXH3814** NIF <text> is not a valid parameter.

**Explanation:** There is an invalid statement in the template modification file.

**User Response:** Correct or remove the statement in the template modification file (VSTSTPLT.CFG).
EXH3815  **NIF D/42 Support Enabled**

**Explanation:** Information message. Support for the Dialogic D/42 is enabled.

**User Response:** If D/42 cards are being used, no action is required. If D/42 cards are not being used, delete the Dialogic D/42 support code.

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EXH3816  **T1 network error, board <name>, value <number>**

**Explanation:** The number shown is the 16 bit event data value for the error which has occurred on the named board. This error will appear whenever a T1 network error is detected, for example 'receive carrier loss', or 'receive loss of sync'. These errors can be transient network errors, or can occur when the network connection is lost.

**User Response:** Check the T1 network connection to your PBX is sound, and if it is then check the network configuration parameters at both ends.

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EXH3817  **NIF No dial tone found on line <number>**

**Explanation:** The system could not detect a dial tone on the line whose number is shown. This error will only appear where standard call progress analysis is being used.

**User Response:** Check that this line is correctly connected to the switch.

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EXH3818  **NIF WARNING - Unexpected SIT during Place Call on line <number>**

**Explanation:** Warning message. An unexpected Special Intercept Tone was detected during the Place Call action or function on the line shown. The telephone network generates Special Intercept Tones, which are usually three tones, but may be different. The SIT tone definitions are set in the Telephony Server Network Interface configuration. The action or function will return SIT detected.

**User Response:** No response is required for this warning, however the remedy would be to check what SITs your network is generating and modify the configuration.

---

EXH3819  **NIF WARNING - Incomplete SIT sequence during Place Call on line <number>**

**Explanation:** Warning message. An incomplete Special Intercept Tone sequence was detected during the Place Call action or function on the line shown. The telephone network generates Special Intercept Tones, which are usually three tones, but may be different. The SIT tone definitions are set in the Telephony Server Network Interface configuration. The action or function will return SIT detected.

**User Response:** No response is required for this warning, however the remedy would be to check what SITs your network is generating and modify the configuration.

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EXH3820  **NIF WARNING - SIT too long during Place Call on line <number>**

**Explanation:** Warning message. A Special Intercept Tone was detected during the Place Call action or function on the line shown, which was too long. The telephone network generates Special Intercept Tones, which are usually three tones, but may be different. The SIT tone definitions are set in the Telephony Server Network Interface configuration. The action or function will return SIT detected.

**User Response:** No response is required for this warning, however the remedy would be to check what SITs your network is generating and modify the configuration.

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EXH3852  **VP 24k recording of <number>s would exceed segment size, reset to <number>**

**Explanation:** The recording requested by the application would exceed the maximum segment size. The maximum segment is 4 000 kbytes. The request may have come from Record_Voice, or from within voice messaging. The recording will be capped at 22 minutes (1320s). This message will only be generated once per system startup (so the log will not be flooded with these messages).

**User Response:** No response is required. The developer can choose either to limit the length specified for the recording, or allow this capping by the system to take place to get the maximum length.

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EXH3853  **VP 32k recording of <number>s would exceed segment size, reset to <number>**

**Explanation:** The recording requested by the application would exceed the maximum segment size. The maximum segment is 4 000 kbytes. The request may have come from Record_Voice, or from within voice messaging. The recording will be capped at 16 minutes (960s). This message will only be generated once per system startup (so the log will not be flooded with these messages).

**User Response:** No response is required. The developer can choose either to limit the length specified for the recording, or allow this capping by the system to take place to get the maximum length.
**EXH3854** VP 48k recording of <number>s would exceed segment size, reset to <number>

**Explanation:** The recording requested by the application would exceed the maximum segment size. The maximum segment is 4,000 kbytes. The request may have come from Record_Voice, or from within voice messaging. The recording will be capped at 11 minutes (660s). This message will only be generated once per system startup (so the log will not be flooded with these messages).

**User Response:** No response is required. The developer can choose either to limit the length specified for the recording, or allow this capping by the system to take place to get the maximum length.

**EXH3855** VP 64k recording of <number>s would exceed segment size, reset to <number>

**Explanation:** The recording requested by the application would exceed the maximum segment size. The maximum segment is 4,000 kbytes. The request may have come from Record_Voice, or from within voice messaging. The recording will be capped at 8 minutes (480s). This message will only be generated once per system startup (so the log will not be flooded with these messages).

**User Response:** No response is required. The developer can choose either to limit the length specified for the recording, or allow this capping by the system to take place to get the maximum length.

**EXH3901** VR Scores from board <text> will be logged to <text>.

**Explanation:** Information message. Indicates the parameter LOG_SCORES has been added to a VR section of VSTS.CFG. Low level VR results will be logged.

**User Response:** No response is required.

**EXH3902** VR Unable to access vocabulary file <filename>.

**Explanation:** The VR component has been configured to use the specified vocabulary, but this does not exist. The vocabulary must be in the main DirectTalk/2 directory. Vocabulary files have extension VBx.

**User Response:** Load the vocabulary, or reconfigure the VR component of the Telephony Server.

**EXH3903** VR Unable to access vocabulary template file <filename>.

**Explanation:** A template file must exist in the main DirectTalk/2 directory for each vocabulary file. Template files, which define the responses returned to the application, have extension TPx.

**User Response:** Create and load the required template file. If a vocabulary has been obtained directly from VCS, you must create the corresponding template file.

**EXH3904** VR Board <text> loading vocabulary <name>.

**Explanation:** Indicates the vocabulary being loaded on each Voice Recognition board.

**User Response:** None.

**EXH3905** VR Voice Stop/CutThru invalid for <text>, vocab <number>.

**Explanation:** An attempt was made to perform a voice stop/voice cut-thru command using the indicated vocabulary. However, the vocabulary does not support the function.

**User Response:** Change the application not to use voice stop/cut-thru, or load a vocabulary that supports it.

**EXH3906** VR Invalid value <text> for parameter <text>.

**Explanation:** A command request message to the Voice Recognition has the invalid value for the specified parameter.

**User Response:** Check the application.

**EXH3907** Recovery from an adjline failure by inst <number>.

**Explanation:** An adjline instance initially failed to start, but was eventually started.

**User Response:** No response is required.

**EXH3908** Recovery from a reco failure by inst <number>.

**Explanation:** A voice reco instance initially failed to start, but was eventually started.

**User Response:** No response is required.
EXH3909  VR Vocabulary file <name>, has invalid subvocab number <number> defined.
Explanation: The subvocabulary number defined in the Voice Recognition Vocabulary Template file is invalid.
User Response: Edit the template file and define a valid subvocabulary number. For further information see the Voice Recognition section of IBM CallPath DirectTalk/2: Application Development User's Guide, SB35-4408

EXH3910  VR Vocabulary file <name>, has two subvocabs=<number> defined.
Explanation: The same subvocabulary number is defined more than once in the Voice Recognition Vocabulary Template file.
User Response: Edit the template file and define the subvocabularies correctly. For further information see the Voice Recognition section of IBM CallPath DirectTalk/2: Application Development User's Guide, SB35-4408

EXH3911  VR Vocabulary file <name>, subvocab <number> has no capabilities defined.
Explanation: The subvocabulary capabilities (for example if discrete or continuous) are not defined in the Voice Recognition Vocabulary Template file. The capabilities are set either as defaults for every subvocabulary in the vocabulary, or as overrides on a particular subvocabulary.
User Response: Edit the template file and define the subvocabulary capabilities. For further information see the Voice Recognition section of IBM CallPath DirectTalk/2: Application Development User's Guide, SB35-4408

EXH3912  VR Vocabulary file <name>, has no subvocabularies defined.
Explanation: No subvocabularies are defined in the Voice Recognition Vocabulary Template file.
User Response: Edit the template file and define the required subvocabularies. For further information see the Voice Recognition section of IBM CallPath DirectTalk/2: Application Development User’s Guide, SB35-4408

EXH3913  VR Board <text> has vocabulary <name> installed.
Explanation: Information message. The vocabulary shown has been found preloaded on this board.
User Response: No response is required.

EXH3930  TTS Unable to access exception dictionary <filename>.
Explanation: The specified Text-To-Speech exception dictionary could not be found.
User Response: Make sure the exception dictionary is in the voice system main directory. Reconfigure the TTS section of the Telephony Server if the name specified is incorrect.

EXH3980  Record <text> OK - exceed disk space warning cushion.
Explanation: Voice recording completed successfully, but the amount of disk space used means that the free space remaining on the disk is now below the warning cushion specified in the Integrated Voice configuration.
User Response: Delete unwanted data from the disk, before it fills and data cannot be recorded.

EXH3981  Record <text> failed - exceed disk space fail cushion.
Explanation: A voice recording was so large that the disk filled to the limit specified in the Integrated Voice configuration.
User Response: Delete unwanted data from the disk.

EXH3990  Trace data lost - comp <number> inst <number>.
Explanation: Telephony Server trace is active, however so much data has been produced that the circular trace buffers have filled before the data was written to disk.
User Response: Reduce the number of instances being traced. If the trace logs are sent for investigation, make sure your service representative is aware of the lost data.

EXH3997  <text>
Explanation: EXH3997, EXH3998, and EXH3999 are generated as a set. Message EXH3997 is the last part of the message, and indicates the condition of the error.
User Response: Report this problem to your service representative.

EXH3998  Component <name>, instance <number> detected the error. Error text-
Explanation: EXH3997, EXH3998, and EXH3999 are generated as a set. Message EXH3998 is the middle part of the message, and indicates the Telephony Server component that has detected an unexpected condition.
User Response: Report this problem to your service representative.
EXH3999  Telephony Server Internal Error, report the following 2 messages:

Explanation: EXH3997, EXH3998, and EXH3999 are generated as a set. Message EXH3999 is the first part of the message, and tells that an unexpected condition has been detected.

User Response: Report this problem to your service representative.
Telephony REXX (TREXX) Messages (4000-4199)

EXH4000 Wrong number of parameters
Explanation: If T-REXX was started from an OS/2 command line, the wrong number of parameters have been supplied. If started via the session monitor, this is an internal error.
User Response: Give the correct number of parameters if started from an OS/2 command line. Report this problem to your service representative if started from the session monitor.

EXH4001 Unable to allocate memory
Explanation: A memory allocation failed.
User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH4002 Node name missing from the global control file
Explanation: In reading the global control file VSGBL.CFG, the node name could not be found.
User Response: Rerun DirectTalk/2 Setup or else edit the control file and add the node name.

EXH4003 The control file (<filename>) is invalid
Explanation: The control file shown is corrupt.
User Response: Rerun DirectTalk/2 Setup.

EXH4004 Unable to access the command file <filename>
Explanation: The system was unable to find and read the command file shown.
User Response: Ensure that the file exists in the main system directory and is readable.

EXH4005 Unable to register REXX exit. rc=<number>
Explanation: The registration of a REXX exit failed with the return code shown.
User Response: Lookup the meaning of the return code in a REXX manual. Contact your service representative if necessary.

EXH4006 Unable to register REXX function.
rc=<number>
Explanation: REXX refused to register a function and returned the return code shown.
User Response: See the REXX manuals for the meaning of the return code and respond accordingly.

EXH4007 The REXX Interpreter returned an error return code of <number>
Explanation: The REXX interpreter returned the return code shown. This will be the consequence of previous errors.
User Response: See preceding messages to determine the cause of this error.

EXH4008 The REXX Interpreter returned the string '<text>'
Explanation: The REXX interpreter returned the string shown in the message.
User Response: Follow the instruction given in the string.

EXH4009 T-REXX processing scheduled for termination
Explanation: T-REXX is about to terminate.
User Response: None

EXH4010 Unable to access the control file <filename>
Explanation: T-REXX was unable to read the control file shown.
User Response: Rerun DirectTalk/2 Setup.

EXH4011 Unable to create REXX variable <text>
Explanation: T_REXX was unable to create the REXX variable shown.
User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH4012 Unable to open sessions with all required servers
Explanation: T-REXX failed to open a session with a server.
User Response: See the GSI log for more details.
EXH4013 Error when opening Telephony Server.  
rc=<number>

Explanation: T_REXX received the return code shown when opening the Telephony Server.

User Response: Look up the return code in the Programming Guide and respond accordingly.

EXH4014 Unable to create state machine ignored.

Explanation: Unable to allocate storage for the state machine.

User Response: Your system is short of memory. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow. Stop other unused applications from running to use less memory.

EXH4015 Unable to open a session with a database server

Explanation: T-REXX failed to open a session with a server.

User Response: See the GSI log for more details.

EXH4016 Error in loading user actions.  
rc=<number> ignored.

Explanation: An OS/2 error occurred when loading the user actions. The OS/2 return code is shown in the message.

User Response: See the OS/2 documentation for the meaning of the return code and act accordingly.

EXH4017 Error in loading system actions.  
rc=<number>

Explanation: An OS/2 error occurred when loading the system actions. The OS/2 return code is shown in the message.

User Response: See the OS/2 documentation for the meaning of the return code and act accordingly.

EXH4018 Error in obtaining the addresses of actions

Explanation: The Actions were loaded successfully but T-REXX was unable to find their address.

User Response: Report this problem to your service representative.

EXH4019 Action <name> is invalid

Explanation: The action shown is corrupt.

User Response: Report this problem to your service representative.

EXH4020 Running T-REXX program <name>

Explanation: The T-REXX program named is being run.

User Response: No response is required.

EXH4021 T-REXX function called in a non-TREXX program

Explanation: The T-REXX function is being called by a file without the extension TRX.

User Response: Rename the file so that its extension is TRX.

EXH4022 Error in T-REXX initializing Session Monitor trace.  
rc=<number>

Explanation: T-REXX obtained the error return code shown when initializing trace.

User Response: Ensure that enough memory is available. If there is, Report this problem to your service representative.

EXH4023 Unable to load T-REXX Binary Translate file <filename>

Explanation: The file shown could not be loaded into memory.

User Response: Check the file exists. If the file exists, it is either corrupt or else too big to load into the memory available. Ensure that there is sufficient free space for the OS/2 swapper file (SWAPPER.DAT) to grow, and regenerate the file if necessary.

EXH4024 Telephony Server open error reason code is <number>

Explanation: T-REXX obtained the return code shown when opening the Telephony Server.

User Response: See the GSI log.

EXH4025 T-REXX stopped by the Session Monitor

Explanation: Information message. A T-REXX application has been stopped by the session monitor

User Response: No response is required.
Configuration Program Messages (4400-4499)

**EXH4400**  Configuration was unable to open the file: `<filename>`.  
**Explanation:** The file name or the path may be incorrect or the file may not exist.  
**User Response:** Check the path and name. If the file does not exist then it may be necessary to reinstall or reconfigure part of the product.

**EXH4401**  Configuration encountered a read error in file: `<filename>` at line `<number>`.  
**Explanation:** The file has been damaged in some way. The file may be corrupt on your hard disk or an encoded file has been modified.  
**User Response:** If you suspect that the hard disk is at fault then run CHKDSK to determine any disk errors. If the file was shipped as part of DirectTalk/2 you may have to delete the file and reinstall part of the product. If the file is created by configuration then delete the file and rerun the configuration program.

**EXH4402**  Too few parameters on line `<number>` of file: `<filename>`.  
**Explanation:** The configuration file requires a minimum of 5 parameters. If it has fewer, then the file is incorrect.  
**User Response:** For ISA machines, rerun the Dialogic installation to correct the file. For MCA machines, the file will be created when you restart (reboot). Rerun the DirectTalk/2 configuration program.

**EXH4403**  Required parameter 'TYPE=' was not found in file: `<filename>` at line `<number>`.  
**Explanation:** The Dialogic configuration requires that SRB: and CCM: statements must start with a 'TYPE=' parameter.  
**User Response:** Either edit the file and insert the parameter or rerun the Dialogic installation. Then rerun the DirectTalk/2 configuration program.

**EXH4404**  An unmatched driver/switch pair was found in CONFIG.SYS.  
**Explanation:** The Aculab installation requires that there is an equal number of card and switch device driver statements.  
**User Response:** Check the Aculab installation. Edit the file and follow the Aculab installation guidelines. Restart (reboot) when you have finished to ensure the changes are implemented. Then rerun the DirectTalk/2 configuration program.

**EXH4405**  More than 60 Aculab ports were found in CONFIG.SYS. The ports used will be the number of phone lines.  
**Explanation:** Current support is for only 60 E1 Aculab ports. Note that the number of usable ports will be determined by the number of installed voice lines.  
**User Response:** Remove the extra Aculab definitions from CONFIG.SYS and reboot. Rerun the configuration program.

**EXH4406**  Configuration was unable to find any cards. Check the hardware installation.  
**Explanation:** Dialogic or Aculab support was not installed or has been installed incorrectly.  
**User Response:** Check the Dialogic or Aculab installation and reinstall if necessary. Rerun the configuration program.

**EXH4407**  The following card: `<name>` is unknown. It may not be supported.  
**User Response:** Remove the card details from the Dialogic or Aculab configuration and rerun the DirectTalk/2 configuration program, or press F12 to ignore the card.

**EXH4408**  Configuration was unable to write to file: `<filename>`.  
**Explanation:** The file name or the path may be incorrect, or the file may be owned by another process, or the disk may be full.  
**User Response:** Check the path and name and remaining disk space. Data may be lost if the file cannot be written. Rerun the DirectTalk/2 configuration program.

**EXH4409**  Configuration cannot continue with this section.  
**Explanation:** A non-recoverable error occurred during Telephony Server configuration.  
**User Response:** See previous message.

**EXH4410**  Unable to open panel `<name>`. Panel return code = `<number>`.  
**Explanation:** The panel return codes are as follows:  
1=Panel is already open.  
2=The maximum of 29 panels are already open.  
3=Panel not found on current disk.  
4=Seek error in panel library. The file may be damaged.
5=Unrecoverable DOS read error while loading panel.
6=Insufficient memory for panel load.
7=Display is not set to 80 character color mode.
8=Panel is not in the correct format.
9=Internal panel name does not match requested name.
10=Panel library open failure.
11=Panel contains more lines than the current screen.

**User Response:** Check the panel library as per the return code.

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**EXH4411** Press F12 to continue configuration without this card

**Explanation:** Informational message used in conjunction with message EXH4407.

**User Response:** No response required.

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**EXH4412** Unable to find the required Dialogic environment DLCFGPATH. The Dialogic installation may not be correct.

**Explanation:** A version of the Dialogic software that is older than system release 4.11 was found.

**User Response:** Remove the older version of the Dialogic software and install the version that was supplied with the system. Rerun the DirectTalk/2 configuration program.
Alerts (4590-4599)

**Explanation:** This is a NetView Alert from a user application, generated by the Send_Alert action or the vmsSendAlert API. For further information see IBM CallPath DirectTalk/2: Application Development User’s Guide, SB35-4408.

**User Response:** Note the message and respond accordingly.
Configuration and Setup
Messages (4600-4699)

EXH4600 System configuration was unable to open the file: <filename>.
Explanation: The configuration program attempted to read the file shown but encountered an error. The file may not exist, or may be in use by another process.
User Response: Check that the file exists, and if found check what other programs are running which might be using it and close them down, then try again. If it does not exist, rerun installation to create it.

EXH4601 System configuration encountered a read error in file: <filename>.
Explanation: There was a data read error while the configuration program was reading the file shown. The file may be damaged.
User Response: Look at the specified file with an editor (if it is an ASCII text file) to see if there are any obvious signs of corruption. Run the OS/2 CHKDSK command on the drive where the file is stored to check for file allocation errors.

EXH4602 The variable name: <name> in file: <filename> is too long.
Explanation: The name shown is longer than 16 characters which is not allowed.
User Response: Use an OS/2 editor to correct the file shown and shorten the name.

EXH4603 Missing leading quotes on data for variable: <name> in file: <filename>.
Explanation: The value of a variable must be enclosed in double quotes. The configuration program found that the leading quotes for the value of the variable shown were missing.
User Response: Use an OS/2 editor to correct the file and insert the leading quotes for the variable.

EXH4604 Missing trailing quotes on data for variable: <name> in file: <filename>.
Explanation: The value of a variable must be enclosed in double quotes. The configuration program found that the trailing quotes for the value of the variable shown were missing.
User Response: Use an OS/2 editor to correct the file and add a double quote at the end of the variable value.

EXH4605 System configuration encountered a memory allocation error in routine: <text>.
Explanation: The configuration program could not allocate any more memory while executing the function shown.
User Response: Examine your system and determine if there is enough resource (real memory and swap file space) to run the configuration program. If necessary, shut down other programs to allow the configuration program to run.

EXH4606 System configuration was supplied with a NULL status structure in routine: <text>.
Explanation: The configuration program was passed a bad parameter to the internal routine shown. The status structure contains information about the current configuration state.
User Response: Re-run the configuration program. If the error persists contact your service representative.

EXH4607 System configuration was passed an unknown command line parameter: <text>. It will be ignored.
Explanation: The configuration program only responds to certain command line parameters and will ignore any that it doesn't recognise. It may be that the command line argument was mis-typed.
User Response: Check that the command line parameter is correct.

EXH4608 No valid filename was supplied on the command line when one was required.
Explanation: As a consequence of other command line arguments, the configuration program expected a filename to be supplied, but none was found.
User Response: Specify a -f <filename> parameter on the command line.

EXH4609 System configuration was unable to find either of the files: <filename> and <filename>.
Explanation: The filenames shown will usually be VSGBLCFG and T_SYSTEM.SPL. At least one of the files must exist during configuration. (VSGBLCFG is the target file - if it does not exist, configuration will create it by using default information in T_SYSTEM.SPL).
User Response: If you have a backup copy of VSGBLCFG or T_SYSTEM.SPL then restore it, otherwise create a new copy of T_SYSTEM.SPL by re-installing the product. Then run configuration again.
EXH4610  System configuration was unable to find the resource DLL: <filename>.
Explanation: The configuration file could not find the DLL shown that contains all of the resources for the user interface.
User Response: Ensure that the file is either in the current directory or in a directory specified in the LIBPATH in the OS/2 CONFIG.SYS file.

EXH4611  System configuration encountered this unknown return code: <number>.
Explanation: The configuration program received an error code that it could not produce a meaningful error message for.
User Response: Note the error number and re-run the configuration program. If the error persists contact your service representative.

EXH4612  Open session error with configuration parser in routine: <text>.
Explanation: There was not enough resource to open a session with the configuration parser.
User Response: Examine your system and determine if there is enough resource (real memory and swap file space) to run the configuration program. If necessary shut down other programs to allow the configuration program to run.

EXH4613  Error returned from QuerySysInfo(). Return code=<number>.
Explanation: There was an OS/2 error while making a call to the QuerySysInfo() function. The error code is likely to be 87 or 111.
User Response: The error will usually result from an internal error in the configuration program. Note the error number and re-run the program. If the error persists contact your service representative.

EXH4614  The system boot drive has changed since configuration was last run. Make sure your current CONFIG.SYS is set up correctly.
Explanation: The configuration program detected that the system boot drive has changed.
User Response: If this was an intended step, then there may not be a problem. This is a warning about the possibility that the required statements in the CONFIG.SYS file may not be present in the copy on the new boot drive. If you are in any doubt, check CONFIG.SYS to make sure that everything is correct.

EXH4615  The node name: <name> in file: <filename> is too long.
Explanation: The node name shown is longer than 8 characters which is not allowed.
User Response: Use an OS/2 editor to correct the file and shorten the node name.

EXH4616  You must enter a node name.
Explanation: A node name is required in the field indicated by the cursor.
User Response: Enter a valid node name into the field.

EXH4617  The node name cannot contain embedded blanks.
Explanation: The node name in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks.

EXH4618  You must enter a description.
Explanation: You must enter a description into the field indicated by the cursor.
User Response: Enter one.

EXH4619  No valid configuration data was found in file: <filename>. Defaults will be used.
Explanation: The configuration program found a file of the correct name, but was unable to get some or all of the required information from the file.
User Response: In most circumstances, this will be harmless, but is a warning that some defaults will have been taken. It is possible that the file was incorrectly saved on a previous configuration or has been modified by another program such that some information has been removed from the file. You should pay careful attention to all the settings in the configuration program to ensure that the defaults are correct for your system and change them as necessary.

EXH4620  The file: <filename> contains no valid information or is damaged.
Explanation: The configuration program found a file of the correct name, but was unable to get any of the required information out of the file.
User Response: The configuration program was unable to make any defaults with the file in its current state. The file may be damaged, so you should run the OS/2 CHKDSK program to ensure there are no disk problems. Make a backup of the file and erase the original and the configuration program will create a new file.
EXH4621 You must enter a session ID.
Explanation: You must enter a session ID into the field indicated by the cursor.
User Response: Enter one.

EXH4622 The session ID cannot contain embedded blanks.
Explanation: The session ID in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks.

EXH4623 You must specify a control file.
Explanation: You must enter a control file name into the field indicated by the cursor.
User Response: Use the drop down list to select an existing control file that is already on the system or type in the filename of the control file that you wish to use.

EXH4624 You must enter an application name.
Explanation: You must enter an application name into the field indicated by the cursor.
User Response: Use the drop down list to select an existing application that is already on the system or type in the name of the application that you wish to use.

EXH4625 The application name cannot contain embedded blanks.
Explanation: The application name in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks from the application name.

EXH4626 The application name must be no more than 5 characters.
Explanation: The application name in the field indicated by the cursor is longer than 5 characters which is not allowed.
User Response: Change the application name to be 5 characters or less.

EXH4627 The node name cannot contain the characters "+", ";", ":", or ";".
Explanation: The characters listed in the error message are not permitted in a node name.
User Response: Change the node name so that it does not have any of the characters shown.

EXH4628 The node name is a duplicate. Please re-specify.
Explanation: The node name that was entered has already been defined. All node names must be unique.
User Response: Specify a different node name that has not already been defined.

EXH4629 The session ID is a duplicate. Please re-specify.
Explanation: The session ID that was entered has already been defined. All session IDs must be unique.
User Response: Specify a different session ID that has not already been defined.

EXH4630 The application name is a duplicate. Please re-specify.
Explanation: The application name that was entered has already been defined.
User Response: Specify a different application name that has not already been defined.

EXH4631 Naming conflict in file <filename>.
Statement cannot contain both GROUP_LISTEN and PRIVATE_LISTEN.
Explanation: The GSI configuration file cannot have both a GROUP_LISTEN and a PRIVATE_LISTEN parameter defined in a single statement.
User Response: Use an OS/2 editor to correct the specified file and remove one of the parameters from the statement.

EXH4632 The environment variable DLCFGPATH is not set. This is required to configure the telephony hardware correctly.
Explanation: The configuration program was unable to read the environment variable DLCFGPATH set by the Dialogic software installation. It points to where the Dialogic configuration information is stored.
User Response: Check that the Dialogic software has been installed correctly and that the environment variable is correctly defined in CONFIG.SYS. If the statement is correct in CONFIG.SYS, it may be that the system has not been rebooted since the Dialogic software was installed. If this is the case, you must reboot the system to ensure that the configuration program can correctly detect and configure all of the Dialogic cards installed in the system.
EXH4633 Unable to find the file <filename> in the path pointed to by the DLCFGPATH environment variable.

Explanation: The configuration program looks for the Dialogic configuration files in the directory pointed to by the DLCFGPATH environment variable. If it cannot find the files, then it cannot configure the telephony hardware correctly.

User Response: If the filename shown is DIALOGIC.CFG then you should reinstall the Dialogic software to ensure the file is rebuilt correctly. If the filename shown is DIALOGIC.INF then you should reboot the system and the file will be created automatically if the Dialogic statements in CONFIG.SYS are correctly defined. If, after the reboot, the DIALOGIC.INF file is still missing, there may be a problem with either the statements in CONFIG.SYS or the hardware installed in the system.

EXH4634 System configuration found a version of the file DIALOGIC.INF that is too old.

Explanation: The configuration program cannot read older versions of the DIALOGIC.INF file.

User Response: You must install the correct level of the Dialogic software that was supplied with the product. Older versions of the software will not work with this release.

EXH4635 System configuration was unable to verify the contents of the file DIALOGIC.INF.

Explanation: Validation checking failed on the DIALOGIC.INF file. The file is probably damaged.

User Response: Erase the file and reboot the system to create a fresh copy it.

EXH4636 System configuration found an old or unknown version of the file DIALOGIC.CFG.

Explanation: The configuration program cannot read older versions of the DIALOGIC.CFG file.

User Response: You must install the correct level of the Dialogic software that was supplied with the product. Older versions of the software will not work with this release.

EXH4637 The parameter file <filename> has an incorrect version number.

Explanation: The configuration program cannot read older versions of country parameter files.

User Response: You probably have some old country parameter files in the main product directory. Make sure that you re-install the country files from the original product media.

EXH4638 The following card: <name> had download errors. You may experience problems if you try to use it.

Explanation: The configuration program detected that the card shown did not download correctly at boot up time.

User Response: There is likely to be a problem with the Dialogic hardware or software installation. Consult the Installation Guide and ensure that the problem is resolved since it is unlikely that the card will work in its current state.

EXH4639 You must enter a group name.

Explanation: You must enter a group name into the field indicated by the cursor.

User Response: Use the drop down list to select an existing group name that is already defined or type in the group name that you wish to use.

EXH4640 The group name cannot contain embedded blanks.

Explanation: The group name in the field indicated by the cursor has blanks in it, which is not allowed.

User Response: Remove the blanks from the group name.

EXH4641 The host name cannot contain embedded blanks.

Explanation: The host name in the field indicated by the cursor has blanks in it, which is not allowed.

User Response: Remove the blanks from the host name.

EXH4642 The host terminal definition cannot contain embedded blanks.

Explanation: The host terminal definition in the field indicated by the cursor has blanks in it, which is not allowed.

User Response: Remove the blanks from the terminal definition.
EXH4643 The codepage cannot contain embedded blanks.
Explanation: The codepage in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks from the codepage.

EXH4644 The codepage must be a valid number.
Explanation: The codepage must be specified as a number.
User Response: Enter a valid codepage number into the field indicated by the cursor.

EXH4645 You must enter a server name.
Explanation: You must enter a server name into the field indicated by the cursor.
User Response: Enter a valid server name.

EXH4646 The server name cannot contain embedded blanks.
Explanation: The server name in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks from the server name.

EXH4647 You must enter a DLL file name.
Explanation: You must enter a DLL filename into the field indicated by the cursor.
User Response: Enter one.

EXH4648 The DLL file name cannot contain embedded blanks.
Explanation: The DLL name in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks from the DLL name.

EXH4649 You must enter a DLL function name.
Explanation: You must enter a function name into the field indicated by the cursor.
User Response: Enter a valid DLL function name.

EXH4650 The DLL function name cannot contain embedded blanks.
Explanation: The DLL function in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks from the DLL function name.

EXH4651 You must specify at least one path.
Explanation: You must have at least one path for extended interface servers.
User Response: Specify at least one path for the server.

EXH4652 System configuration was unable to write to file: <filename>.
Explanation: The configuration program was unable to open the specified file for writing. The file may be in use by another process or may be defined as read-only.
User Response: Check which other programs are running on the system and stop any programs that are currently accessing the file. Use the OS/2 ATTRIB command to determine the current file attributes of the file and remove the read-only attribute if it is set.

EXH4653 The LAN adapter must be 0, 1, 2 or 3 only.
Explanation: You may only specify a value of 0 to 3 for the LAN adapter number.
User Response: Correct the value in the field indicated by the cursor.

EXH4654 You cannot specify the local node when lines support is not installed.
Explanation: The local node has no telephony capability if lines support is not installed, so it is not valid to specify the local node.
User Response: Use the drop down list to select a remote node that is already defined or type in a node name that you wish to use.

EXH4655 You cannot specify the local node when voice messaging is not installed.
Explanation: The local node has no mailbox capability if voice messaging is not installed so it is not valid to specify the local node.
User Response: Use the drop down list to select a remote node that is already defined or type in a node name that you wish to use.

EXH4656 You must enter a filename.
Explanation: You must enter a filename into the field indicated by the cursor.
User Response: Enter a valid filename.
EXH4657  The filename cannot contain embedded blanks.
Explanation: The filename in the field indicated by the cursor has blanks in it, which is not allowed.
User Response: Remove the blanks from the filename.

EXH4658  The filename contains invalid FAT filename characters.
Explanation: The filename in the field indicated by the cursor has characters in it which are invalid in the FAT file naming system.
User Response: Change the filename to remove the illegal characters.

EXH4659  The log file size must be between <number> and 1,000,000 Kbytes inclusive.
Explanation: The log file size in the field indicated by the cursor is out of the allowed range shown.
User Response: Specify a log file size that is within the range.

EXH4660  There is insufficient disk space for the selected log files.
Explanation: The total file size specified for all the log files will not fit onto the available disk space.
User Response: Use the Disk Space button to determine how much free space there is on the hard drive adjust the log file sizes accordingly.

EXH4661  The filename is a duplicate. Please re-specify.
Explanation: The filename in the field indicated by the cursor is the same as one of the others, which is not allowed.
User Response: Change the filename to be unique.

EXH4662  The filename is too long for FAT naming convention.
Explanation: The filename in the field indicated by the cursor does not conform to FAT 8.3 file naming conventions.
User Response: Change the filename so that name is no more than 8 characters and the extension is no more than 3 characters.

EXH4663  The number of sessions must be between <number> and <number> inclusive.
Explanation: An invalid number of sessions has been entered.
User Response: Enter a number within the given range.

EXH4664  The session short name is too great for the number of sessions defined.
Explanation: The short name is outside the valid range. The range of the short name is determined by the number of sessions defined.
User Response: Look at the number of sessions defined, then use a short name that is within a valid range.

EXH4665  The minutes or seconds cannot be greater than 59.
Explanation: The number of minutes or seconds entered was greater than 59.
User Response: Enter a number less than or equal to 59.

EXH4666  You must enter a session ID prefix.
Explanation: A session ID prefix was not entered.
User Response: Enter a valid session ID prefix.

EXH4667  The session ID prefix cannot contain embedded blanks.
Explanation: The session ID prefix contains embedded blanks.
User Response: Enter a valid session ID prefix, one which does not contain embedded blanks.

EXH4668  You must enter a default codepage.
Explanation: A default host codepage was not entered.
User Response: Enter a valid host codepage.

EXH4669  You must enter a default host name.
Explanation: A default host name was not entered.
User Response: Enter a valid host name.
EXH4670 You must enter a default host terminal definition.
Explanation: A host terminal definition was not entered.
User Response: Enter a valid host terminal definition.

EXH4671 The initial LU number is too great for the number of sessions defined.
Explanation: The LU number must be in a range determined by the number of sessions defined.
User Response: Look at the number of sessions defined, then enter an initial LU number as appropriate.

EXH4672 The ARTIC card number cannot be more than 7.
Explanation: No more than 7 ARTIC cards can be installed or configured for your machine.
User Response: Enter a card number that is 7 or less.

EXH4673 The ARTIC port number cannot be more than 7.
Explanation: No more than 7 ARTIC cards can be installed or configured for your machine.
User Response: Enter a port number that is less than 7.

EXH4674 The PU address must be a valid hexadecimal number.
Explanation: An invalid PU address was entered.
User Response: Enter a PU address which consists of only hexadecimal numbers.

EXH4675 You must enter a service point name.
Explanation: A service point name was not entered.
User Response: Enter a valid service point name.

EXH4676 The service point name cannot contain embedded blanks.
Explanation: The service point name contains embedded blanks.
User Response: Enter a valid service point name, one that does not contain embedded blanks.

EXH4677 The service point name cannot contain the characters ‘’, ‘;’ or ‘:’.
Explanation: The service point name contains one of the characters ‘’, ‘;’ or ‘:’.
User Response: Enter a valid service point name, one that does not contain an invalid character.

EXH4678 The number of paths must be between <number> and <number> inclusive.
Explanation: An invalid number of paths was specified.
User Response: Enter a number within the given range.

EXH4679 You must enter a VTAM application.
Explanation: A VTAM application name was not entered.
User Response: Enter a valid VTAM application name.

EXH4680 The VTAM application cannot contain embedded blanks.
Explanation: A VTAM application name containing embedded blanks was entered.
User Response: Enter a valid VTAM application name, one that does not contain blanks.

EXH4681 You must enter a host transaction.
Explanation: A host transaction name was not entered.
User Response: Enter a valid host transaction name.

EXH4682 The host transaction cannot contain embedded blanks.
Explanation: The host transaction name contains embedded blanks.
User Response: Enter a valid host transaction name, one that does not contain blanks.

EXH4683 You must enter a log mode.
Explanation: A log mode was not entered.
User Response: Enter a valid log mode.
EXH4684 The log mode cannot contain embedded blanks.
Explanation: The log mode name contains embedded blanks.
User Response: Enter a valid log mode name, one that does not contain blanks.

EXH4685 The line number must be between <number> and <number> inclusive.
Explanation: An invalid line number was entered.
User Response: Enter a valid line number, one that is in the range specified.

EXH4686 The number of extra clients must be between <number> and <number> inclusive.
Explanation: The number entered for extra clients was invalid.
User Response: Enter a valid number, one that is in the range specified.

EXH4687 The session short name must be alphabetic.
Explanation: The session short name contained numbers or non-alphabetical characters.
User Response: Enter a session short name that uses only alphabetic characters.

EXH4688 The specified codepage is not supported.
Explanation: DirectTalk/2 does not support the specified codepage.
User Response: Enter a codepage that DirectTalk/2 does support.

EXH4689 You must enter a PU address.
Explanation: A PU address was not entered.
User Response: Enter a valid PU address.

EXH4690 The description must not contain a double quote.
Explanation: A string containing a double quote was entered.
User Response: Enter a description that does not contain a double quote.

EXH4691 The initialization string must not contain a double quote.
Explanation: An initialization string containing a double quote was entered.
User Response: Enter an initialization string that does not contain a double quote.

EXH4692 You cannot specify the local node when not running voice applications.
Explanation: When configuring the system as a node in a network, and you have selected to not run voice applications, then you cannot select LOCAL for the telephony server node name or mailbox server node name.
User Response: Enter the name of a remote node in the telephony server node name or mailbox server node name.

EXH4693 The save completed successfully.
Explanation: The settings have been saved.
User Response: No response is required.

EXH4694 The tone ID is a duplicate.
Explanation: The tone ID already exists.
User Response: Specify a new tone ID.

EXH695 You cannot specify to send statistics when collecting remote statistics
Explanation: You've selected send statistics, but this node was previously set up to collect statistics. A node cannot be configured to both send and collect statistics at the same time.
User Response: If the node was set up to collect statistics then deselect Send statistics.

License Message (5300)

EXH5300 License validation for <name> has failed.
Explanation: You have attempted to start the DirectTalk/2 feature shown, but the necessary license diskette has not been installed.
User Response: Obtain and install the required license diskette. See the IBM CallPath DirectTalk/2: Installation Guide for details of how to do this.
Chapter 4. DirectTalk/2 Return Codes

This chapter contains return codes (and some request codes and response codes) which can appear in messages.

The codes are arranged in groups according to which module of the DirectTalk/2 API they relate.

If you are seeking a return code which was presented to you in a message, first look the message up in Chapter 3, “DirectTalk/2 Messages” on page 3-1. Then, when you have found it, look backwards from the message to the previous heading which will tell you which module issued the message. Then look in that module’s section here for the return code given.

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### Data Base Server and Data Base API Return Codes

From include file dbapir.H:

<table>
<thead>
<tr>
<th>Macro Name</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO_RECORD_FOUND</td>
<td>4</td>
<td>Requested record not in file</td>
</tr>
<tr>
<td>TBL_FUL</td>
<td>206</td>
<td>Exceeded file table capacity</td>
</tr>
<tr>
<td>OPN_ERR</td>
<td>207</td>
<td>File open error</td>
</tr>
<tr>
<td>EXCEED_BTREE_FILES</td>
<td>208</td>
<td>Internal DB Server error</td>
</tr>
<tr>
<td>DB_FILE_OPEN</td>
<td>210</td>
<td>File is open, cannot CREATE</td>
</tr>
<tr>
<td>NOLOCK</td>
<td>211</td>
<td>Path does not have a lock</td>
</tr>
<tr>
<td>EXCEED_LOCKS</td>
<td>212</td>
<td>Path can't have more 3 locks</td>
</tr>
<tr>
<td>FILE_ALREADY_LOCKED</td>
<td>213</td>
<td>Can't have 2 locks on same name</td>
</tr>
<tr>
<td>LOCKED</td>
<td>214</td>
<td>File has a lock</td>
</tr>
<tr>
<td>NOT_EQUAL_EQUAL</td>
<td>215</td>
<td>Get update not &quot;==&quot; search op</td>
</tr>
<tr>
<td>DEADLOCK</td>
<td>216</td>
<td>Deadly embrace</td>
</tr>
<tr>
<td>OTHERSLOCK</td>
<td>217</td>
<td>Other than req path has lock</td>
</tr>
<tr>
<td>FILE_DAMAGED</td>
<td>240</td>
<td>DB file messed up</td>
</tr>
<tr>
<td>NO_WRITE_ALLOWED</td>
<td>247</td>
<td>Can't open file in write mode</td>
</tr>
<tr>
<td>WAITING_ON_LOCK</td>
<td>252</td>
<td>Lock not available, waiting</td>
</tr>
<tr>
<td>NO_WRITE_SHARING</td>
<td>253</td>
<td>Another DB Server has it open</td>
</tr>
<tr>
<td>NO_WRITE_SESSION</td>
<td>254</td>
<td>Session didn't open WRITE_MODE</td>
</tr>
<tr>
<td>DBSRV_DISK_FULL</td>
<td>257</td>
<td>Write failed, disk bull</td>
</tr>
</tbody>
</table>
Directory Server Request and Return codes

From include file VSDII.H:

/#c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/...7/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/
/#c5197 Directory API Request Codes/#c5197/
/#c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/...7/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/
/#c5197 Directory API Return Codes/#c5197/
/#c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/...7/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/

#define Direct_Add 1
#define Direct_Delete 2
#define Direct_By_Name 3
#define Direct_By_Phone 4
#define Direct_By_Id 5
#define Direct_Change 6
#define Direct_Seq 7

/#c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/...7/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/
/#c5197 Directory API Return Codes/#c5197/
/#c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/...7/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/c5197/

#define DIRECT_GOOD /zerodot
#define DIRECT_NOT_COMPLETE 1
#define DIRECT_NOT_FOUND 2
#define DIRECT_ERROR 3
GSI (General Server) Return Codes

From include file GSAPIR.H:

```c
#define GS_CANCEL_INCOMPLETE 899 /* Prior stop not done x'383'*/
#define GS_FILE_OPEN_FAIL 898 /* File open failure x'382'*/
#define GS_LOCAL_SERVER_INIT 897 /* Bolt on server init failed x'381'*/
#define GS_APPC_NO_INVITE 896 /* No APPC path turnaround x'380'*/
#define GS_INVALID_PATH 895 /* Path number too high for GSI x'37F'*/
#define GS_FP_ONLY_ONE_BIND 894 /* Fast Path requester bound twice x'37E'*/
#define GS_INVALID_ADAPTER 893 /* Invalid adapter on open session x'37D'*/
#define GS_INVALID_SESS_TYPE 892 /* Invalid sess type on open sess x'37C'*/
#define GS_SERVER_LOAD 891 /* DLL Load failed x'37B'*/
#define GS_PATH_START_FAIL 890 /* Insufficient resources for path x'37A'*/
#define GS_NODE_RESTART 889 /* Node restarted x'379'*/
#define GS_LENGTH_ERROR 888 /* Excedded max length x'378'*/
#define GS_API_LENGTH_ERROR 887 /* I/O area too short x'377'*/
#define GS_OPER_NOT_WRITE_PW 886 /* Node operator needs write PW x'376'*/
#define GS_OPER_NOT_READ_PW 885 /* Node operator needs read PW x'375'*/
#define GS_CURR_PW_MISMATCH 884 /* PW change, current PW wrong x'374'*/
#define GS_NODE_SUSPENDED 883 /* Node suspended pending restart x'373'*/
#define GS_DUPLICATE_PW 882 /* Change would result in dup PW x'372'*/
#define GS_INV_SCREEN_LANG 881 /* Unsupported visual language x'371'*/
#define GS_STRING_LENGTH 880 /* String too long x'370'*/
#define GS_INVALID_SRV_RESP 879 /* Invalid server response code x'36F'*/
#define GS_INVALID_UI_DEFINE 878 /* InitUI() response invalid x'36E'*/
#define GS_INV_SERV_MGMT_RESP 873 /* Server resp_code incorrect x'369'*/
#define GS_INV_SERV_UI_COL 872 /* Server UI invalid column type x'368'*/
#define GS_SYSTEM_CMD_TIMEOUT 869 /* Op Sys command didn't finish x'365'*/
#define GS_NO_SYS_LOGS 868 /* No System logs present x'364'*/
#define GS_UNKNOWN_FUNCTION 864 /* Function unknown x'360'*/
#define GS_EXCEED_MAX_TIMEOUT 863 /* Timeout value too large x'35F'*/
#define GS_SERVER_MISMATCH 862 /* Server name changed while bound x'35E'*/
#define GS_INVALID_REQUEST 861 /* Server cannot perform request x'35D'*/
#define GS_PATH_CAN 860 /* GSI path cancelled x'35C'*/
#define GS_SERVER_DEFECT 859 /* Server DLL module bad x'35B'*/
#define GS_SERVER_STOPPED 858 /* Server temporarily stopped x'35A'*/
#define GS_INVALID_MENU_ID 857 /* Server doesn't know menu ID x'359'*/
#define GS_INVALID_RESOURCE 856 /* Resource flag exceeds quantity x'358'*/
#define GS_CONTROL_FILE 855 /* Corrupt control file x'357'*/
#define GS_API_HANDLE_RE_ENTRY 854 /* Two threads using one API handle x'356'*/
#define GS_FP_SERVER_RE_ENTRY 853 /* Cannot re-enter FP path x'355'*/
#define GS_INVALID_ID_AREA 852 /* I/O area pointer on Open bad x'354'*/
#define GS_INVALID_TIMEOUT 851 /* Else path parm on Open incorrect x'353'*/
#define GS_INVALID_GSI_NAME 850 /* GSI name invalid format x'352'*/
#define GS_INVALID_CLIENT_NAME 849 /* Client name invalid format x'351'*/
#define GS_INVALID_DRIVE 848 /* Invalid disk drive x'350'*/
#define GS_RENAME_ERROR 847 /* Unexpected work file rename err x'34F'*/
#define GS_FILE_WRITE_ERROR 846 /* Unexpected file write error x'34E'*/
```
#define GS_FILE_READ_ERROR 819 /* Unexpected file read error x'333'*/
#define GS_RESPONSE_TRUNCATED 818 /* Response was too LONG x'332'*/
#define GS_INVALID_SESS_QUAN 815 /* Session quantity on Open x'32F'*/
#define GS_INVALID_SESS_HANDLE 814 /* Session handle not open x'32E'*/
#define GS_FILE_OP_HANDLE 813 /* Invalid file operation handle x'32D'*/
#define GS_GETMAIN_FAIL 812 /* Insufficient storage x'32C'*/
#define GS_NO_FP_DEFINED 811 /* No Fast Paths defined in GSI x'32B'*/
#define GS_NO_FP_AVAILABLE 810 /* All FP paths busy or stopped x'32A'*/
#define GS_EXCEED_SESSION_CAP 809 /* Exceeded MAX_SESS (254) x'329'*/
#define GS_EXCEED_MAX_FILE_OPS 808 /* cannot do any more any x'328'*/
#define GS_FILE_OP_RES_NAME 807 /* Invalid resource name - file op x'327'*/
#define GS_FILE_OP_SEQUENCE 806 /* File operations sequence num x'326'*/
#define GS_SHOULD_NOT_OCCUR 805 /* Bug somewhere in the code x'325'*/
#define GS_CANCELLED 804 /* GSI cancelled session x'324'*/
#define GS_CLOSED 803 /* GSI closed session x'323'*/
#define GS_IND_SERVER_UNKNOWN 802 /* Indirect Server unknown to GSI x'322'*/
#define GS_IND_SERVER_UNAVAIL 801 /* Indirect Server unavailable x'321'*/
#define GS_SHUTDOWN 800 /* General server is terminating x'320'*/

/************************************************************************
/* old communications return codes for compatibility */
/************************************************************************
#define GS_INVALID_SESSION 202 /* Invalid session with request x'002'*/
Mailbox Server Return Codes

From include file VSMBI.H:

#define MBOX_OK 0
#define MBOX_NO_MAILBOX 1
#define MBOX_NO_NOTEBOOK 2
#define MBOX_NO_ITEM 3
#define MBOX_NO_ROOM 4
#define MBOX_NO_ITEM_SEG 5
#define MBOX_IN_USE 6
#define MBOX_ITEM_IN_USE 7
#define MBOX_BAD_COPY 8
#define MBOX_NO_MORE 9
#define MBOX_NO_BOXES 10
#define MBOX_ERROR 19
Voice Application Developer Password Return Codes

From include file VSADI.H:

/* Return Codes Section */
/* */
/* In addition to the following return codes, you may get Data Base Server return codes. See DBAPIR.H if you get a return code in the 200 range. */

#define VAD_PWD_ADD_ALREADY_PWD 401 /* File already has a password (Add) */
#define VAD_PWD_MISSING_PWD 402 /* File has no password (Chg/Del) */

/* Incorrect passwords contain valid data but are not the same password */
#define VAD_PWD_MISMATCH_PWD 405 /* Password incorrect (Chg/Del) */
#define VAD_PWD_MISSING_FILE 407 /* Application/Language incorrect */
#define VAD_PWD_DAMAGED_FILE 408 /* Password info damaged */
#define VAD_PWD_INSUFF_MEMORY 409 /* malloc() failed */

/* various bad parameters */
#define VAD_PWD_NULL_PARM 420 /* Null parm pointer passed */
#define VAD_PWD_INVALID_LANGUAGE 421 /* Bad language parameter */
#define VAD_PWD_INVALID_APPLNAME 422 /* Bad application parameter */
#define VAD_PWD_INVALID_TYPE 423 /* Bad application file type */
#define VAD_PWD_INVALID_DB_SESS 424 /* Bad Data Base Session */
#define VAD_PWD_INVALID_NEW_PWD 425 /* Bad new password parm (Add/Chg) */
#define VAD_PWD_INVALID_PWD 426 /* Bad password parm (Chg/Del) */
Voice Server Return Codes and Reason Codes

From include file VMSVAERR.H:

```c
#define VARBAD -1 /* error on request */
#define VARGOOD 0 /* request completed ok */
#define VARDTMF 1 /* request ended by DTMF tones */
#define VARHANG 2 /* request ended by hangup */
#define VARTIME 3 /* request timed out */
#define VARTERM 4 /* terminating DTMF received */
#define VARMAXT 5 /* max tones received */
#define VARBUSY 6 /* phone was busy on call */
#define VARNOAN 7 /* no answer on call */
#define VARNORG 8 /* no ring on call */
#define VAROPIN 9 /* operator intercepted call */
#define VARBDNM 10 /* named line not found */
#define VARIUSE 11 /* named line in use */
#define VARAHANG 12 /* named line hung up */
#define VARANSM 13 /* called line has answering machine */
#define VARUNREC 14 /* unrecognized voice response */
#define VARIOFL 15 /* overflow on record voice */
#define VARLERR 16 /* ATVR_LASTERR occurred */
#define VARLTERM 17 /* ATVR_LASTTERM occurred */
#define VARNODT 18 /* No dial tone detected */
#define VARESCV 19 /* operation stopped */
#define VARPLAYV 20 /* play stopped on noise */
#define VARRECO 21 /* play stopped on recognised voice */
#define VARVSTOP 22 /* call answered by fax m/c or modem */
#define VARMAXSIL 23 /* maximum silence exceeded */
```

```c
#define VASUNEXP 1 /* unexpected return from card */
#define VASONH 2 /* phone is on-hook */
#define VASVIO 3 /* virtual I/O error */
#define VASDBS 4 /* error accessing DB server */
#define VASDBG 5 /* DB Server GET error */
#define VASPLAYV 6 /* card error playing voice */
#define VASDBD 7 /* DB Server DELETE error */
#define VASGDTMF 8 /* card error getting DTMF tones */
#define VASPDITMF 9 /* card error putting DTMF tones */
#define VASREC 10 /* card error recording voice */
#define VASDBP 11 /* DB Server PUT error */
#define VASBADRQ 12 /* Bad request code */
#define VASLNNA 13 /* requested line unavailable */
#define VASTXLN 14 /* text server line/resource unavailable */
#define VASTXSV 15 /* text server error */
#define VANOK 16 /* key not in DB */
#define VANOFIL 17 /* file not in DB */
#define VANOSP 18 /* No space left for record */
#define VANOUT 19 /* Outbound calls not allowed */
#define VANOSPL 20 /* No space left for record */
#define VARESCV 21 /* already attached to a resource */
#define VARREPSIZE 22 /* reply size not large enough */
#define VADOSFILEER 23 /* dos file error, eg. does not exist */
```
#define VANOREP 24 /* read only... */
#define VANOPART 25 /* replacement not allowed */
#define VANOTYPE 26 /* error accessing sub-part of segment */
#define VANAUTH 27 /* callers phone is not the correct */
#define VATRANERR 28 /* type for operation, e.g. not ADSI */
#define VATRANAUTH 27 /* no authority given to perform the */
#define VATRANAUTH 27 /* requested operation */
#define VATRANERR 28 /* protocol error transferring data */
#define VATRANERR 28 /* protocol error transferring data */
#define VAAPIC 49 /* Error detected within API, see */
#define VAAPIC 49 /* va_apierr for more details */

--------------------------------------------------------------------------

#define VAAPIC 200 /* error on request to Telephony Server */
#define VAAPIC 200 /* e.g. parameter set incorrectly */
#define VAAPIC 201 /* error from TLD routine */
#define VAAPIC 202 /* bad parameter to API call */
#define VAAPIC 203 /* unable to allocate memory */
#define VAAPIC 204 /* error GSI call to TS or TS I/F */
#define VAAPIC 205 /* response error - e.g. unexp. value */
Telephony Server Integrated Voice Functions Return Codes

From include file VSTSIV.H:

```c
#define IV_RC_INVPARAM 1 /* one of the set up parameters was invalid, see auxrc for parameter type */
#define IV_RC_INVSTREAM 2 /* invalid stream specified, auxrc gives the stream number specified */
#define IV_RC_NOSEG 3 /* no segments listed for stream */
#define IVOPEN_RC_NONEFREE 10 /* no free streams */
#define IVPARAM_RC_RECTYPE 2 /* the stream is in record mode and an */
#define IVPLAY_RC_NOVP 30 /* no VP server channel attached */
#define IVPLAY_RC_NOTTS 31 /* no TTS server channel attached */
#define IVPLAY_RC_NOT_COMPL 32 /* play not complete, check stopreason */
#define IVPLAY_RC_MISS_SEG 33 /* one or more segments missing on play */
#define IVPLAY_RC_VCESUPP 34 /* voice termination request not supported */
#define IVPLAY_RC_NOVR 35 /* no VR attached */
#define IVPLAY_RC_NOADS 36 /* no ADSI attached */
#define IVRECD_RC_NOSEG_REPL 40 /* record segment exists, no allow replace */
#define IVRECD_RC_INVSERV 41 /* server specified does not exist */
#define IVRECD_RC_INVDB 42 /* database specified does not exist */
#define IVCHECK_RC_MISS_SEG 50 /* one or more segments missing on check */
#define IVIMP_RC_INVREPL 60 /* attempt to replace seg on import with */
#define IVIMP_RC_NO_FILEIN 61 /* input file is not present or cannot open */
#define IVIMP_RC_INV_FILEIN 62 /* import file invalid contents */
#define IVEXP_RC_INVREPL 70 /* attempt to replace file on export with */
#define IVEXP_RC_NO_FILEOUT 71 /* output file cannot be opened */
#define IV_PARAM_ADSIFUN 1
```
## Telephony Server Response Codes

From include file VSTSGEN.H:

```c
#include "VSTSGEN.H"

#define TSPRC_OK 0       /* Request handled by sub-server */
#define TSPRC_NOTINST 20 /* The function indicates a server that is */
                    /* not installed. */
                    /* (This return must be distinguished from */
                    /* the GSI return 864, server does not */
                    /* support function number requested.) */
#define TSPRC_NORESP 21 /* The sub-server was called but did not */
                    /* respond within the timeout value for */
                    /* that server. */
                    /* The second two bytes of the Secondary */
                    /* Response Code indicate the device */
                    /* channel number that timed-out. */
#define TSPRC_CHANINOP 22 /* The channel of the sub-server is */
                    /* inoperable */
                    /* The second two bytes of the Secondary */
                    /* Response Code indicate the device */
                    /* channel number that is not available. */
#define TSPRC_SERVINOP 23 /* The sub-server is inoperable */
                    /* The second two bytes of the Secondary */
                    /* Response Code indicate why the */
                    /* sub-server is not available. */
#define TSPRC_RESPLEN 24 /* The maxresll does not meet the minimum */
                    /* required. */
#define TSPRC_INVINST 25 /* an invalid component instance for the */
                    /* session was specified */
#define TSPRC_INSTLOST 26 /* the component attachment was forcibly */
                    /* detached by another attachment */
#define TSPRC_REQLEN 27 /* The request buffer is not long enough */
                    /* for a TS IF block and sub-server request */
                    /* data */
#define TSPRC_TSIFDATA 28 /* spare data fields in the TS IF header */
                    /* are set */
#define TSPRC_NOTATT 29 /* no attachment to sub-server on this */
                    /* session */
#define TSPRC_SYSMSG 30 /* system error - message queue functions */
#define TSPRC_REPLYLEN 31 /* the reply length is longer than the */
                    /* response buffer length */
```

---

Chapter 4. DirectTalk/2 Return Codes 4-11
Telephony Server Network Interface Server Return Codes

From include file VSTSNIF.H:

```
#include <VSTSNIF.H>

#define NIF_RC_OK 0 /* No error */
#define NIF_RC_NOTOPENED 1 /* Device channel has not been opened */
#define NIF_RC_NOCMD 2 /* Command data element not found */
#define NIF_RC_INVCMD 4 /* Unknown hardware request */
#define NIF_RC_UNKNOWN 5 /* Unknown hardware error */
#define NIF_RC_INVHANDLE 6 /* Invalid device descriptor (open handle) */
#define NIF_RC_FUNCETO 7 /* Hardware function timeout */
#define NIF_RC_QOVERFLOW 8 /* Hardware event queue overflow */

#define NIFCT_RC_NOTIDLE 10 /* Channel was not idle or in proper mode to perform command */
#define NIFPT_RC_INVTYPE 20 /* the tone type requested is not supported */
#define NIFPT_RC_INVTONE 21 /* the tone specified cannot be generated */
#define NIFPT_RC_NOTIDLE 22 /* Channel was not idle or in proper mode to perform command */

#define NIFGT_RC_MAX 30 /* maximum tones set to 0 */
#define NIFGT_RC_RESPSIZE 31 /* the response area is not large enough for the maximum allowed tones */
#define NIFGT_RC_NOTONESTO 32 /* Wait for tones timeout */
#define NIFGT_RC_UNKNOWN 33 /* Unknown I/O termination */

#define NIFMC_RC_DISALLOWED 40 /* Outbound calls not allowed */
#define NIFMC_RC_INVTYPE 41 /* the digit type requested isn't supported */
#define NIFMC_RC_INVDIGIT 42 /* the digit specified cannot be generated */
#define NIFMC_RC_LINEINOP 43 /* the current line state is inoperable */
#define NIFMC_RC_NODIAL 44 /* no dial tone received */
#define NIFMC_RC_NOTIDLE 45 /* Channel was not idle or in proper mode to perform command */
#define NIFMC_RC_UNKNOWN 46 /* Unknown I/O termination */
#define NIFMC_RC_HUNGUP 47 /* Hangup found during transfer */

#define NIFWC_RC_NOCALLTO 50 /* there was no call received in the time period specified. */
#define NIFWC_RC_LINESTATE 51 /* the line is not currently on-hook */

#define NIFSS_RC_INERROR 60 /* line is currently in error state */
#define NIFWS_RC_INVSTATE 70 /* line in incorrect state for request */
#define NIFWS_RC_TIMEOUT 71 /* none of the requested states was entered in the period specified. */
#define NIFWS_RC_UNKNOWN 72 /* Unknown I/O termination */

#define NIF_PARAM_NUMDIGITS 1
#define NIF_PARAM_TONETYPE 2
#define NIF_PARAM_STATE 11
```
/* waitlinestate */
#define NIF_PARAM_NEWSTATE 21
Telephony Server Voice Processing Server Return Codes

From include file VSTSVP.H:

```c
#define VPGT_RC_MAX 30 /* maximum tones set to 0 */
#define VPGT_RC_RESPSIZE 31 /* the response area is not large enough for */
#define VPGT_RC_NOTONESTO 32 /* Wait for tones timeout */
#define VPPL_RC_VCESUPP 40 /* voice termination request not supported */
#define VPPL_RC_NOVR 41 /* voice term requested by VR not attached */
#define VP_PARAM_PLAYADDR 1
#define VP_PARAM_SMPRATE 2
#define VP_PARAM_SMPCODE 3
#define VP_PARAM_VOCAB 4
#define VP_PARAM_ADSIMODE 5
#define VP_PARAM_MAXTONES 11
#define VP_PARAM_REQTO 13
#define VP_PARAM_NUMTONES 21
#define VP_PARAM_TONETYPE 22
#define VP_PARAM_MAXTIME 31
#define VP_PARAM_BUFSIZE 32
```

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Telephony Server Voice Recognition Server Return Codes

From include file VSTSVR.H:

```c
/* parameter identifiers for TSFRC_INVPARAM */
/* recognise */
#define VR_PARAM_MAXutters 1 /* max utterances value equal 0 or too lrg */
#define VR_PARAM_SUBVOCAB 2 /* subvocab value equal 0 or too large */
#define VR_PARAM_UTTERTO 3 /* inter-uttarance timeout use or value */
#define VR_PARAM_REQTO 4 /* request timeout use or value */
#define VR_PARAM_SCOREDETAIL 5 /* score details for non-score board */
#define VR_PARAM_STRLEN 6 /* min or max number string words */
#define VR_PARAM_INITSIL 7 /* initial silence time value or method */
#define VR_PARAM_ENDSIL 8 /* ending silence time value or method */
#define VR_PARAM_NUMSTR 9 /* number of string hypothesis wanted */
```

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Analog Display Services Interface Server Return Codes

From include file VSTSADS.H:

```c
/**************************
/ * ADS Server Function Error Codes (set in TSD_RET funrc) *
/ * 
/ **************************

/* parameter identifiers for TSFRC_INVPARAM */
/* play */
#define ADS_PARAM_DATALEN 1
#define ADS_PARAM_DATATYPE 2
#define ADS_PARAM_TERMFLAG 3
#define ADS_PARAM_SUBSTNUM 4
#define ADS_PARAM_STARTMODE 5
```
Telephony Server Text-To-Speech Server Return Codes

From include file VSTSTTS:

/*****************************/
/                        */
/                        */
/* TTS Server Function Error Codes (set in TSD_RET funrc) */
/                        */
/*****************************/

/* parameter identifiers for TSFRC_INVPARAM */
/* sattext */
#define TTS_PARAM_TEXTADDR 1
### Telephony Server T–L–D Return Codes

From include file VSTSTLDD.H:

```c
#define TLD_RC_OK 0 /* successful open */
#define TLD_RC_INVTLDC 1 /* invalid control buffer address */
#define TLD_RC_TLDCOPEN 2 /* the control buffer is flagged as being open */
#define TLD_RC_READADDR 3 /* the data buffer address for a read operation is invalid (e.g. NULL) */
#define TLD_RC_INVMODE 4 /* invalid mode (value to set or for fun) */
#define TLD_RC_NOMEM 5 /* the required buffer size could not be allocated */
#define TLD_RC_BADTLDC 6 /* control buffer signature is invalid */
#define TLD_RC_NOTFOUND 7 /* no data element matching the type specified were found, if type was TLD_TYPE_ANY then the end of the buffer has been reached */
#define TLD_RC_CORRUPT 8 /* the data buffer, or the size given, is corrupt */
#define TLD_RC_INVSTART 9 /* the starting point is invalid */
#define TLD_RC_BUFFFULL 10 /* the data buffer is full (user specified buffer) */
#define TLD_RC_INVADDR 11 /* invalid buffer address specified */
#define TLD_RC_EX64K 12 /* message would exceed 64kb */
#define TLD_RC_INVSEEK 13 /* invalid seek type */
#define TLD_RC_SYSER 99 /* internal inconsistency in code */
```
### Various Functions and System Actions Return Codes

From include file VSACTUTL.H:

```c
#define EDGE0 0 /* Edge 0 or DTMF 0 */
#define EDGE1 1 /* Edge 1 or DTMF 1 */
#define EDGE2 2 /* Edge 2 or DTMF 2 */
#define EDGE3 3 /* Edge 3 or DTMF 3 */
#define EDGE4 4 /* Edge 4 or DTMF 4 */
#define EDGE5 5 /* Edge 5 or DTMF 5 */
#define EDGE6 6 /* Edge 6 or DTMF 6 */
#define EDGE7 7 /* Edge 7 or DTMF 7 */
#define EDGE8 8 /* Edge 8 or DTMF 8 */
#define EDGE9 9 /* Edge 9 or DTMF 9 */
#define EDGE10 10 /* Edge 10 or DTMF */
#define EDGE11 11 /* Edge 11 or DTMF */
#define EDGE12 12 /* Edge 12 or */
#define EDGE13 13 /* Edge 13 or */
#define EDGE14 14 /* Edge 14 or */
#define EDGEHUP 14 /* Edge Hangup */
#define EDGESYSERR 15 /* Edge System Error */
```
This appendix provides information about DirectTalk/2 trace.

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Appendix A. Warning

The information contained in this appendix is provided as a reference for people skilled in using the product. It should normally be used only under specific instruction from your support technician. There are some traces which can have some value in everyday use, but these are in the minority.

The output generated by any trace is liable to change at any time and should never be used and relied upon for any application. The information contained here was as accurate as possible at the time of printing.

You can also use this information as a guideline as to how much impact the trace will have on your system and it will also help you understand how to use the trace should you be asked to do so. Note: In some cases the traces may be helpful in diagnosing problems in user actions, servers etc. The internal traces are not multilingual the default language will be English. We are interested in any problems or suggestions you have with the internal traces. They are not, however, eligible for problem support or APARS.
Appendix B. Conventions & General Information

This section documents the conventions used throughout the document and general information on where to set traces. Select from the following:

- Conventions used in this document
- General Trace Information
- Where to set traces
- GSI Request & Response Codes

Conventions used in this document

The layout of this document will generally adhere as detailed here. Each trace item will have some or all of the following entries:

- **Component:** - the part of DT/2 that the trace is for.
- **Version:** - the applicable DT/2 version.
- **Trace on:** - how to turn the trace on.
- **Trace off:** - how to turn the trace off.
- **Where:** - where to set the trace.
- **Description:** - what the trace is for.
- **Output:** - where the data will go (file <filename> or screen).
- **Impact:** - how the system is impacted by the trace.
- **Results:** - description of what data is expected.
- **Pre-req:** - any pre-requisite tracing required.
- **Extra:** - any extra useful information.

Some traces require extra or variable arguments. These are defined within chevrons e.g. `<gsi_name>` where the text between the chevrons is an English description of what data is expected to be entered. There is one special case, `<std_switches>` which uses a standard convention for obtaining levels of trace information. Most traces are set by means of an environment variable. Most traces can be turned off by setting their value to 'NO' or undefining them and some require that they be undefined to turn them off. To describe a variable being undefined the text `<NULL>` will be used to mean that nothing should be entered e.g. SET ENV_VAR=<NULL> where nothing is typed after the equals sign.

General Trace Information

Many (but not all) of the traces adhere to one standard for tracing. That is, they use an environment variable or configuration file statement that has a value equal to the standard switches that should be set. Also, setting the value to 'YES' will set all switches to be on. The capability to use standard switches is indicated by the statement `<std_switches>` in the 'Trace on:' entry for the trace. The switches are defined as follows:

1 = Module flow
2 = Bad events
3 = All events
4 = I/O Data dump
5 = Reserved.
6 = Reserved.
7 = Storage dumps
Switches 5 thru 8 are defined for DT/2 version 1.x but are not consistently used and they are also currently not used for nearly all parts of DT/2 version 2.x.

Example: SET ENV_VAR=123 sets switches 1, 2 and 3. Preceding any of the switches with a 'T' will cause a timestamp to be added to each trace statement which is useful for timing problems.

USEFUL TIP (1): To cut down the amount of data being logged in most traces you can set the environment variable SET VS_TRACE_TRUNC=nnn where nnn is the size of data to truncate at. This will work for all standard tracing which includes node manager, telephony server, database server, configuration trace and others. It does not, however, include GSI tracing or GSI client tracing. These traces can be cut down by using the environment variable SET VSGSI_TRACE_TRUNC=nnn.

USEFUL TIP (2): To cut down the disk I/O overhead of tracing many instances or running high impact traces you can use in-memory tracing. Use the environment variable SET VS_TRACE_INMEM=nn where nn is the size of the trace buffer in Kbytes (1024 bytes) for each instance being traced. The trace output will now be re-directed to an area of memory and will automatically wrap round within the buffer. This will lessen the system impact because the trace is not being written to disk all the time unless a failure occurs. Note that you must have trace event 2 (Bad events) turned on to flush the trace buffer to disk in case a bad event occurs. The memory buffers will also be written to disk if the tracing process ends. Be careful not to set the trace buffer too large when tracing many instances. Each instance gets its own memory buffer, so the total extra memory required for the trace can become significant with a poor choice for the size of the buffer.

Note: Not all DT/2 tracing uses the standard trace handler. Terminal emulation tracing is known to be an exception. Also, not all forms of tracing will produce output on any particular part of the product.

Module flow

Module flow tracing will provide information on the entry points and exits points for all internal functions by name. Each level of entry is indented by one character to make reading easier. This level of tracing has a medium impact on the system and will be affected by the number of internals calls being made. The trace is useful to determine where the code is getting to before a problem occurs.

Bad events

Bad events tracing will provide information on any error conditions that occur within the code. Information will usually include extra return code information internal to the code. This trace has a very low impact on the system and is therefore very suitable for long-term tracing of intermittent problems.

All events

All events tracing will provide information on any items that the programmer decided would be useful to log. This may often help to qualify any error messages by logging data states before and after the error. The all events tracing automatically includes bad events tracing. This trace has a low to medium impact on the system depending on the amount of data that is logged.
I/O Data dump

Data dump tracing will provide large amounts of input/output data. This is useful to follow data streams and their contents. This trace has a medium to high impact on the system due to the potentially large amounts of data to log. It is recommended that you consider using VS_TRACE_TRUNC or VSGSI_TRACE_TRUNC in conjunction with this trace.

Storage dump

Storage dump tracing is usually used for special case tracing where data that is not normally logged is needed to investigate a particular problem. This sort of trace would normally be done on a one-off basis for example trying to find a memory related bug. The impact on the system will be variable depending on the nature of the trace.

Restarts

Restarts tracing will provide information about restart recovery and error recovery within the code. This is useful to get data about automatic retries, for example. The impact on the system will normally be fairly low.

Locking

Locking tracing will provide information on resource locks within the code. This is particularly relevant to semaphores. This trace will show whether a semaphore is blocking the code execution, for example. The impact on the system will normally be medium to high.

Where to set traces

The location to set the trace is given for each trace by the Where: item for the trace. This section provides information on how to set the trace for the following areas:

RUNGSI.CMD
VSTS.CFG
SSGSI.CFG
OS/2 command line
RUNNMGR.CMD
VSEXEC.CFG

Note: All of the examples provided may not exactly match the files on your system, but are intended as guidelines only.

RUNGSI.CMD

Use your favorite text editor to edit the file and use the following example to determine where you should insert the trace statements:

@echo off
REM First call command file that sets message prefix environment variable
CALL TMSSETMP

<Insert your traces here>

:LOOP
TMSSUSP
IF ERRORLEVEL 1 GOTO QUIT
REM Start General Server Interface (GSI) using configuration file SSGSI.CFG
TMSX
REM If cancelled GSI with Ctrl-Break, don't restart
IF ERRORLEVEL 1 GOTO QUIT
GOTO :LOOP
:QUIT

VSTS.CFG

Use your favorite text editor to edit the file and use the following example to determine where you should insert the trace statements. The TRACE= parameter can be added to NIF, VP, VR, TTS, TDD and IV statements as required.

TYPE=NIF
QUANTITY=8 DEV_NAME=VOXB/zerodot DLL=TSNIFDA.DLL CHAN_START=1
DEF_FILE=LSIXXX.NIF ALL_CARD_FILE=PARM0002.DTA
ALL_CHAN_FILE=PARM0003.DTA

<add the TRACE= <std_switches> here as required>
<add the LOG_PLACECALL parameter here>
<add the DIAG_RECORD = "R,P,D" parameter here>
PHONE_NO_1="2444" PHONE_NO_2="2444"
PHONE_NO_3="2444" PHONE_NO_4="2444"
PHONE_NO_5="2444" PHONE_NO_6="2444"
PHONE_NO_7="2444" PHONE_NO_8="2444"

TYPE=VP
QUANTITY=8 DEV_NAME=VOXB/zerodot DLL=TSVPDIAL.DLL CHAN_START=1
DEF_FILE=DXXX.VP

<add the TRACE= <std_switches> here as required>
<add the LOG_SCORES parameter here>

TYPE=VR
QUANTITY=8 DEV_NAME=VRXB/zerodot DLL=TSVRDIAL.DLL CHAN_START=1
DEF_FILE=VRP.VR

<add the TRACE= <std_switches> here as required>
<add the LOG_SCORES parameter here>

TYPE=IV
QUANTITY=8 DLL=TSIVF.DLL CHAN_START=1
DEF_FILE=TSIVF.IV

<add the TRACE= <std_switches> here as required>

SSGSI.CFG

Use your favorite text editor to edit the file and use the following example to determine where you should insert the trace statements:

* Eight line GSI configuration file

TYPE=GS_NODE

<add the D= <std_switches> here as required>

STATS=1;

* S E R V E R S

*******************************************************************************

B-4 DirectTalk/2 Problem Solving Guide
* Local Bolt on DB Server

* Local Bolt on Telephony Server

* Local Bolt on NetBIOS OS/2 Command Server

* Local Client Fast Paths

* Local Statistics Server

* Voice Messaging Servers
SERVER_NAME=DIRECTRY
PROGRAM=DIRSRV
EXTENDED_INTERFACE
QUANTITY=8
PARM="DIRSRV.CFG";
*
TYPE=SERV_LOC
DESCRIPTION="Mailbox Server Paths"

<add the D= <std_switches> here as required>
SERVER_NAME=MAILBOX
PROGRAM=MBSRV
EXTENDED_INTERFACE
QUANTITY=8
PARM="MBSRV.CFG";
*
******************************************************************************
* Local Client Paths
******************************************************************************
*
TYPE=REQ_LOC_NETB
MAXIMUM=16368
DESCRIPTION="Locally attached client paths"
QUANTITY=14;
*
TYPE=SERV_LOC
DESCRIPTION="Session Monitor Path"

<add the D= <std_switches> here as required>
SERVER_NAME=VSEXEC
PROGRAM=VSEXEC
EXTENDED_INTERFACE
QUANTITY=1
PARM="VSEXEC.CFG";

OS/2 command line

From an OS/2 command line, just type the command given in the Trace on: section of the trace you want to set. Then run the part of DT/2 that you want to trace, for example RUNGSI.CMD etc.

RUNNMGR.CMD

Use your favorite text editor to edit the file and use the following example to determine where you should insert the trace statements:

@echo off
REM First call command file that sets message prefix environment variable
CALL TMSSETMP
REM Start Interactive Node Manager using private path VS_NODE_MGR
REM To set Operator Name, add -m parameter i.e. -mMgr_Oper_Name
TMSV2 -sVS_NODE_MGR -t65 <add the -D=<std_switches> trace here>

VSEXEC.CFG

Use your favorite text editor to edit the file and use the following example to determine where you should insert the trace statements:

TYPE=EXECUTOR_PROGRAM PATH=D:\DTALK\VMSMACH.EXE;
TYPE=LOG_FILE_SIZE MAXSIZE=100000;
TYPE=EXECUTOR_START
TR_SESSIONS=2

<Insert your trace here>

NAME=demoapp1 STARTUP_FILE=demoappl.ctl MSG_LANG=E TR_ADAPTER=255;
GSI Request & Response Codes

All Requests and Responses going through the General Server Interface (GSI) have a two byte signed integer as the Request type and the Response results. The response code is usually referred to as the Primary Return Code (PRC) or just the Return Code (RC). Generally, a zero value for the PRC means the request was performed successfully. The GSI Req/Resp blocks are symmetrical, the request and response code are in the same position in their respective blocks (displacement +8);

The GSI Response block also has a 4 byte Secondary Return Code (SRC) which can be used to further clarify the meaning of the PRC.

Return codes originate in various layers of the system. They may be generated by APIs, Communications subsystems (NetBIOS, APPC), the GSI program, etc. This list is a collection of all the various values that could be found at the time of writing. It is not complete, however, any new ones that you find that are not documented we would appreciate being informed.

Because GSI Request/Response codes may be seen in Decimal, Hex (numbers are preceded by an 'X') and Intel (Reversed Bytes) Hex (numbers are preceded by an 'IX'), all three forms are shown in this document.

Note: If all you want to see in the trace is the Req/Resp codes, you can request the GSI to truncate the trace output, which will speed up the trace. Before starting the Voice System (GSI), put the following in the RUNGSI.CMD file before the TMSX command:

\[
\text{SET VSGSI\_TRACE\_TRUNC } = 16
\]

If you wish to trace the Client, the GSI API trace can be turned on. In Version 2, all APIs are layered on top of the GSI API, all Client Server session control and data can be traced. This trace is enabled with the VSGSI\_TRACE setting.

Select from the following lists of request/response codes:

- Common GSI Response Codes
- Database Request Codes
- Database Response Codes
- Telephony Server Request Codes
- Mailbox Request Codes
- Mailbox Response Codes
- Directory Server Request Codes
- Directory Server Response Codes
- GSI Path Session Management Request Codes
- Node Management Request Codes
- Node Management Response Codes

Common GSI Response Codes

- 203 Session closed by GSI
- 204 Session cancelled by GSI
Database Request Codes

01 X'0001' IX'0100' Create new file
11 X'000B' IX'0B00' Close file
21 X'0015' IX'1500' Get key only
22 X'0016' IX'1600' Get key and data
23 X'0017' IX'1700' Get data for update
25 X'0019' IX'1900' Check for file exist
26 X'001A' IX'1A00' Get file version
31 X'001F' IX'1F00' Add key and data
32 X'0020' IX'2000' Replace data
33 X'0021' IX'2100' Delete key and data
41 X'0029' IX'2900' Get lock wait
42 X'002A' IX'2A00' Get lock no wait
51 X'0033' IX'3300' Release lock
61 X'003D' IX'3D00' Get file statistics
71 X'0047' IX'4700' Get DB directory path
81 X'0051' IX'5100' Set session write mode
91 X'005B' IX'5B00' Get space remaining
96 X'0060' IX'6000' Get system voice file compression rate

Database Response Codes

004 X'0004' IX'0400' No record found
206 X'00CE' IX'CE00' Exceeded file table capacity
207 X'00CF' IX'CF00' Open error
208 X'00D0' IX'D000' Internal DB server error
210 X'00D2' IX'D200' File open, cannot create
211 X'00D3' IX'D300' Path has no lock
212 X'00D4' IX'D400' Exceeded maximum of 3 locks
213 X'00D5' IX'D500' Exceeded maximum of 1 lock per file
214 X'00D6' IX'D600' File is locked
215 X'00D7' IX'D700' Search criteria is not ==
216 X'00D8' IX'D800' Deadlock
217 X'00D9' IX'D900' Path other than requester has the lock
240 X'00F0' IX'F000' File damaged
247 X'00F7' IX'F700' File cannot be opened for write
252 X'00FC' IX'FC00' Waiting for lock (lock polling)
253 X'00FD' IX'FD00' Another DB server has the file open
254 X'00FE' IX'FE00' Write failed, session is opened for read
257 X'0101' IX'0101' Write failed, disk is full

Telephony Server Request Codes

The telephony server does not follow the normal pattern for request and response codes. The request code for the telephony server corresponds to the sub-component that the request is for. See the information on TELETRC for details on what the component numbers are. Remember that the word will be byte-reversed in the dump e.g. sub-component 5 (NIF) will show up as IX'0500'.
Mailbox Request Codes
01 X'0001' IX'0100' Assign mailbox
02 X'0002' IX'0200' Delete mailbox
03 X'0003' IX'0300' Get mailbox data
04 X'0004' IX'0400' Allocate item
05 X'0005' IX'0500' Add item segment
06 X'0006' IX'0600' Update item segment
07 X'0007' IX'0700' Cancel item segment
08 X'0008' IX'0800' Delete item
09 X'0009' IX'0900' Change item viewed
10 X'000A' IX'0A00' Copy item
11 X'000B' IX'0B00' Lock mailbox
12 X'000C' IX'0C00' Unlock mailbox
13 X'000D' IX'0D00' Get item
14 X'000E' IX'0E00' Get item segment
15 X'000F' IX'0F00' Alter mailbox
16 X'0010' IX'1000' Scan locked mailbox
17 X'0011' IX'1100' Release item
18 X'0012' IX'1200' Scan shared mailbox
19 X'0013' IX'1300' Create notebook
20 X'0014' IX'1400' Delete notebook
21 X'0015' IX'1500' Get notebook data
22 X'0016' IX'1600' Alter notebook
23 X'0017' IX'1700' Set paging

Mailbox Response Codes
01 X'0001' IX'0100' No mailbox
02 X'0002' IX'0200' No notebook
03 X'0003' IX'0300' No item
04 X'0004' IX'0400' No room
05 X'0005' IX'0500' No item segment
06 X'0006' IX'0600' In use
07 X'0007' IX'0700' Item in use
08 X'0008' IX'0800' Bad copy
09 X'0009' IX'0900' No more
10 X'000A' IX'0A00' No boxes
19 X'0013' IX'1300' Error

Directory Server Request Codes
1 X'0001' IX'0100' Directory add
2 X'0002' IX'0200' Directory delete
3 X'0003' IX'0300' Get directory by name
4 X'0004' IX'0400' Get directory by phone
5 X'0005' IX'0500' Get directory by id
6 X'0006' IX'0600' Change directory
7 X'0007' IX'0700' Get directory sequentially
Directory Server Response Codes
1 X'0001' IX'0100' Directory not complete
2 X'0002' IX'0200' Directory not found
3 X'0003' IX'0300' Directory error

GSI Path Session Management Request Codes
-0001 X'FFFF' IX'FFFF' Bind server
-0002 X'FFFE' IX'EFFF' Un-bind server
-0003 X'FFFD' IX'DFFF' Bind path
-0004 X'FFFC' IX'CFFF' Un-bind path
-0008 X'FFFF' IX'8FFF' Get node name
-0011 X'FFFF' IX'F5FF' Bind server fastpath
-0125 X'FF83' IX'83FF' Indirect unbind
-0126 X'FF82' IX'82FF' Indirect bind
-0127 X'FF81' IX'81FF' Indirect request
-3856 X'F0F0' IX'F0F0' Path test (palindrome for big endian)

Node Management Request Codes
-00130 X'FF7E' IX'7EFF' Start path
-00131 X'FF7D' IX'7DFF' Soft stop path
-00132 X'FF7C' IX'7CFF' Hard stop path
-00137 X'FF77' IX'77FF' Stop server/node
-00138 X'FF76' IX'76FF' Start server
-00140 X'FF74' IX'74FF' Query trace
-00142 X'FF72' IX'72FF' Set trace
-00146 X'FF6E' IX'6EFF' Test server path
-00147 X'FF6D' IX'6DFF' Node audit started
-00148 X'FF6C' IX'6CFF' Node audit stopped
-00201 X'FF37' IX'37FF' Node manager file transfer open file
-00202 X'FF36' IX'36FF' Node manager file transfer get file
-00203 X'FF35' IX'35FF' Node manager file transfer put file
-00204 X'FF34' IX'34FF' Node manager file transfer erase file
-00205 X'FF33' IX'33FF' Node manager file transfer directory list
-00206 X'FF32' IX'32FF' Node manager file transfer close file
-00248 X'FF08' IX'08FF' Get server display
-00256 X'FF00' IX'00FF' Put server input
-00257 X'FEFE' IX'FEFE' Server list
-00258 X'FEFE' IX'FEFE' Requester list
-00259 X'FEFD' IX'FDFE' Server path list
-00260 X'FEFC' IX'CFCE' Requester path list
-00261 X'FEFB' IX'FBFE' Get local time
-00262 X'FEFA' IX'FAFE' Get local start time
-00263 X'FEF9' IX'F9FE' Restart node
-00300 X'FED4' IX'D4FE' Get problem paths
-00301 X'FED3' IX'D3FE' Get path details
-00303 X'FED1' IX'D1FE' Get path dump
-00304 X'FED0' IX'D0FE' Get server path list
-00305 X'FECF' IX'CFFE' Get requester path list
-00306 X'FECB' IX'CBEF' Get extra path details
-00307 X'FECB' IX'CBEF' Get system log info
-00308 X'FECC' IX'CFFE' Get system log header lines
-00309 X'FECD' IX'CDFE' Get system log
Node Management Response Codes

899 X'0383' IX'8303' Prior stop not complete
898 X'0382' IX'8203' File open failed
897 X'0381' IX'8103' Bolt-on server init failed
896 X'0380' IX'8003' APPC no invite to send
895 X'037F' IX'7F03' Invalid path number
894 X'037E' IX'7E03' Fast path requester bound twice
893 X'037D' IX'7D03' Invalid adapter on open session
892 X'037C' IX'7C03' Invalid session type on open session
891 X'037B' IX'7B03' Bolt-on server load failed
890 X'037A' IX'7A03' Path start failed
889 X'0379' IX'7903' Node restarting
888 X'0378' IX'7803' Exceeded maximum length
887 X'0377' IX'7703' I/O area too short
886 X'0376' IX'7603' Node operator needs write password
885 X'0375' IX'7503' Node operator needs read password
884 X'0374' IX'7403' Password mismatch
883 X'0373' IX'7303' Node suspended pending restart
882 X'0372' IX'7203' Duplicate password
870 X'0366' IX'6603' Missing panel
869 X'0365' IX'6503' Operating system command didn't finish
868 X'0364' IX'6403' No system logs present
864 X'0360' IX'6003' Unknown request code
863 X'035F' IX'5F03' Timeout value too large
860 X'035C' IX'5C03' Server unavailable (busy/stopped)
859 X'035B' IX'5B03' File already exists
858 X'035A' IX'5A03' Invalid source path or file name
857 X'0359' IX'5903' Invalid destination path or file name
855 X'0357' IX'5703' Internal program bug
854 X'0356' IX'5603' Server not defined
853 X'0355' IX'5503' Wrong server got request (bug)
852 X'0354' IX'5403' Non bolt-on requested fastpath
851 X'0353' IX'5303' Not enough space left on disk
850 X'0352' IX'5203' Server not interactive
849 X'0351' IX'5103' Bind table full, max 16 per requester path
848 X'0350' IX'5003' Server name changed while still bound
846 X'034E' IX'4E03' Server cannot perform request
840 X'0348' IX'4803' Path cancelled
838 X'0346' IX'4603' Bolt-on server defective
836 X'0344' IX'4403' Server stopped
827 X'033B' IX'3B03' Cannot re-entry fast path
826 X'033A' IX'3A03' I/O area pointer bad on open
825 X'0339' IX'3903' Timeout parameter bad on open
824 X'0338' IX'3803' Invalid GSI name format
823 X'0337' IX'3703' Invalid client name format
822 X'0336' IX'3603' Invalid disk drive
821 X'0335' IX'3503' Unexpected work file rename error
820 X'0334' IX'3403' Unexpected file write error
819 X'0333' IX'3303' Unexpected file read error
818 X'0332' IX'3203' Response truncated
817 X'0331' IX'3103' Server panel sequence error
816 X'0330' IX'3003' Server panels complete
815 X'032F' IX'2F03' Invalid session quantity on open
814 X'032E' IX'2E03' Invalid session handle on open
813 X'032D' IX'2D03' Invalid file operation handle
812 X'032C' IX'2C03' Insufficient storage
811 X'032B' IX'2B03' No fast paths defined in GSI
810 X'032A' IX'2A03' Fast paths busy or stopped
809 X'0329' IX'2903' Exceeded max sess (255)
808 X'0328' IX'2803' Exceeded max file operations
807 X'0327' IX'2703' Invalid resource name in file operation
806 X'0326' IX'2603' File operation sequence number
805 X'0325' IX'2503' GSI bug
804 X'0324' IX'2403' GSI cancelled session
803 X'0323' IX'2303' GSI closed session
802 X'0322' IX'2203' Indirect server unknown
801 X'0321' IX'2103' Indirect server unavailable (busy/stopped)
800 X'0320' IX'2003' GSI is terminating
Appendix C. Problem Diagnosis

This section gives details on what you can do to help diagnose problems and what traces you should run for typical problem scenarios. Select from the following:

PMR Template
Typical Problem Scenarios

PMR Template

The following template should be used to collect the full system information for the problem machine. If you are a user of the product then you should collect this information and keep it safe for future reference as you may well be asked the same questions when reporting a problem to your support centre. Ideally, keep a copy with the machine to which it applies, then anyone can find the details. If you are a support person, then use the template to collect the necessary information from the user and put it into the PMR. Select from the following:

General Information for a new PMR
Specific PMR Information

General Information for a new PMR

The following minimum information should be provided with a new PMR:

Product and change level
- Version.release.modification - e.g. 2.0.1
- ServicePak level - e.g.UR44064/UR44067
- Any temporary fix modules installed - e.g. TSIVF.DLL dated August 16 1995.
Voice system configuration
- PC CPU Speed and Type - Example 33 Mhz 486
- Amount of RAM - Example 32MB
- Number of lines
- Distributed or standalone
- Product features installed
  - Host communications
  - Voice messaging
  - Text to speech
  - Voice recognition
  - Telephony devices for the deaf (TDD)

Describe the undesired symptom which you think occurred FIRST plus other symptoms which you think may be relevant. In these descriptions, please do not use vague terms like 'crash', 'blew', 'hung'. These terms may be an easy way to describe the problem, but some extra description as to what was happening at the time of the problem can often be essential and very useful to the process of problem diagnosis.

Please also provide details on the nature of the problem:

- Is the problem intermittent - if so, how often does it occur?
- Has the problem only just started?
- Has the system ever run without this problem?
- Is this a new installation?
- Have any changes to anything on the system been applied recently - if so, what changes?

**Specific PMR Information**

Further information should be supplied that details the specifics of the problem. This can be supplied for a new PMR or as update information for an existing PMR as more is discovered about the problem.

**Host communications problems**

If problem involves host communications, send the host session log and supply the following:

- Communications method
  - ARTIC or Portmaster
  - Communications Manager 3270
  - Communications Manager 5250
  - APPC
  - ASCII terminal emulation
- Number of host sessions that are configured

Relevant tracing:

- Low Level Host Emulator Trace
- Host Server Trace
- ARTIC Adapter PCMUX Dump

**Telephony problems**

If the problem involves telephony, supply the following:

- Voice adapter type and quantity
- Telephony Server Voice Cache size
- Recorded voice digitization rate
- Telephony Server parameter changes (.DTA files)
- GSI log file (<nodename>.LOG)
- Telephony server configuration file (VSTS.CFG)
- Dialogic configuration file (DIALOGIC.CFG)

Call control:

- Telephone line connection type
  - Digital T1
  - Digital E1
  - Digital to PBX
  - Analog to PBX
  - Analog to Telco
- Network Interface adapter type and quantity

Voice recognition:

- Reco adapter type and quantity
- Vocabulary

Text to speech:

- TTS adapter type and quantity
Exception dictionary

Telephony devices for the deaf
- TDD quantity

Relevant tracing:
- Telephony server API trace
- TELETRC
- SHOWAT
- GSI Dump with OS/2 Trap
- GSI Dynamic Snap Dump
- Component Trace
- Dialogic API Trace
- Memory Allocation Switch
- Telephony Server Memory Allocation Switch
- Parameter Processing Trace
- Place_a_Call Trace
- Voice Recognition Scores
- Diagnostic Recording
- Diagnostic Recording Playback

**Distributed systems**

Send in SSGSI.CFG files for both client and server node which are involved in the problem. Provide a brief description and/or picture of problem scenario. Identify who is the client and who the server.

Example:

Application running on node 01 is using the system action Get_Record to get a database record from node 02.

```
Client             Server
Node GSSSN01       Node GSSSN02
-------------------  ---------------
Application
Get_Record -------- LAN ---------- User Database
```

Relevant tracing:
- Extended Interface Server Trace
- GSI Client Trace
- Timed GSI Client Trace
- GSI Dump with OS/2 Trap
- GSI Dynamic Snap Dump

**Application execution**

Describe how the application is being executed:
- T-REXX
- Application manager
- Voice application developer

If application manager, what does the node manager display show?
- Red (stopped) - check for message in log file
- Yellow (wait)
- Green (running)
  - Start trace (press F9)
  - Check for application loop - trace shows steps
  - If executing single action (no trace)
    - Stop application using F5
    - Get step number from message in log
    - Check application for step number
    - If user action - check it for problems
    - If system action - report which one

Relevant tracing:
  - GSI Client Trace
  - Timed GSI Client Trace
  - GSI Dynamic Snap Dump
  - Telephony REXX Trace
  - Application Trace
  - Session Monitor Trace

**Displayed message**

Supply the full text of message including message number if shown Describe where the message was seen:
  - System log file
  - Application log file - identify the action type causing the message
  - Voice system (GSI) window
  - etc.

**OS/2 Trap**

Perform the following steps:
  - Include information from OS/2 trap popup
  - Put SET GSI_DUMP=YES in RUNGSI.CMD so the next trap will produce *.DMP.
  - If above is already set, send in *.DMP file(s)
  - Inquire about possibility of getting OS/2 memory dump on diskettes. Note that this requires many diskettes.

Relevant tracing:
  - GSI Dump with OS/2 Trap

**User Actions, Servers and Requesters**

Provide the following information:
  - Which compiler is being used?
  - Is it 16 or 32 bit?
  - Which product APIs are involved?
  - What is the return code?

Relevant tracing:
  - GSI Client Trace
  - Timed GSI Client Trace
GSI Dump with OS/2 Trap
Application Trace

Typical Problem Scenarios

This section provides a list of typical problem scenarios that may be encountered when running the product. It provides a description of the problem together with a list of suggested information and tracing to run to aid the diagnosis of the problem. Select from the following:

- Telephony server internal error
- GSI stops during startup
- Can't connect to host with Portmaster card
- Voice application stuck in 'Proc'
- Place_a_Call is unreliable
- Voice recognition is unreliable
- Telephony action error -1 reason 49

Telephony server internal error

Scenario: You are faced with an EXH3999 telephony server internal error.

Trace action: Look at the next error message (EXH3998) to find out what component the problem occurred in. If the problem is reproducible then use TELETRC to set trace switches 1, 2 and 3 for that component. If you have a large number of lines, you may have to cut down the number of instances that you trace to reduce the performance penalty of the tracing. If the problem is very intermittent then just set trace switch 2.

GSI stops during startup

Scenario: The GSI stops during its startup and either hangs or drops out while starting up one of the servers.

Trace action: Look at the GSI log and note which of the servers failed to start. Look out for EXH2712 Transfer control to <server_name> <init, start, term> routine messages to indicate when the server has been entered and look out for EXH2713 Return from <init, start, term> routine rc=0 messages to indicate when the server has finished processing that routine. Once you have established the server that is having problems, then turn on the Extended Interface Server Trace for that server in the file SSGSI.CFG The GSI client trace may also be useful in this case.

Can’t connect to host with Portmaster card

Scenario: You have installed a Portmaster card to do 3270 host communications and are unable to perform a connect_screen.

Trace action: Run the RTIC trace program RTICTOUT and look at the trace file to see if the host connection is being made successfully and that the PU and LUs are connecting correctly.
Voice application stuck in 'Proc'

**Scenario:** You have written a voice application that appears to hang at a particular call to an action.

**Trace action:** Run the Telephony server API trace to get more information on exactly which call the application is failing. The calling and return parameters will all be listed in the trace.

Place_a_Call is unreliable

**Scenario:** You have written a voice application that uses the Place_a_Call action and it is having problems connecting the to dialled numbers.

**Trace action:** Run the Place_a_Call Trace to get details of each call to the Place_a_Call action. This will show details of why a call worked or failed. This information can then be used to determine which telephony parameters need changing or whether an application change may be needed.

Voice recognition is unreliable

**Scenario:** You have written a voice application that uses one or more of the voice recognition actions and the accuracy appears to be low.

**Trace action:** Use the information in the Application Development User's Guide chapter on voice recognition in conjunction with the Voice recognition scores trace to determine the cause of the low accuracy. Then, adjustments can be made to the telephony server voice recognition parameters or the application to improve the accuracy.

Telephony action error -1 reason 49

**Scenario:** An action has received this error from a Telephony server call and has logged the error in the application session log file. The action will give an error return edge which will cause the application to end unless the application has been set to handle errors.

**Trace action:** Look in the GSI log for a more specific error message. Run the Telephony server API trace to get more details of the parameters used on the Telephony server API calls and the values returned. TELETRC may be required to indicate more fully why the request failed.
Appendix D. Telephony Server Traces

This section covers traces that are applicable to the Telephony Server. Select from the following:

- Telephony server API trace
- TELETRC
- SHOWAT
- Component Trace
- Dialogic API Trace
- Memory Allocation Switch
- Sequence Number Addition
- Telephony Server Memory Allocation Switch
- Parameter Processing Trace
- Place_a_Call Trace
- Voice Recognition Scores
- Internal Message Statistics
- Internal Message Trace
- Diagnostic Recording
- Diagnostic Recording Playback

Telephony Server API Trace

Component: Telephony server.
Version: 2.0 and above.
Trace on:

```
SET TSAPI_TRACE=YES - short trace.
SET TSAPI_TRACE=MSG - message trace.
```

Trace off: SET TSAPI_TRACE=<NULL>

Where: Set in the file RUNGSI.CMD or on a command line before running the required program.

Description: To trace all telephony server API calls at the application level.

Output: File TSAPnnnn.OUT where nnnn is the process ID of the application.

Impact: Medium impact for short trace, high impact for message trace.

Results: The output file will contain details of every telephony server API function being called at the application level including input and output values. The message tracing additionally traces all the internal telephony server messages.

Pre-req: None.

Extra: The following is an edited example trace using the short trace when using the MENU demonstration application (line numbers have been added to the start of each line for the purposes of this example and do not appear in the actual trace):

1) TS API trace started - 1995-03-27 16:33
2) 16:33:51 VAopenE client=GSSSN/zerodot1demoapp1, gsi=GSSSN/zerodot1, line=/zerodot, buf=/zerodot/zerodot1F:424E
3) 16:33:51 VAopenE adapt=255, to=/zerodot, cnt=2 type=192 io=/zerodot/zerodot1F:41F2, iolen=16384
4) 16:33:51 VAopenE exit result=/zerodot srverr=/zerodot (neterr=/zerodot)
5) [api er=0 rc=0 sec=00 00 00 00] [ts funresp=0, funaux=1532713819]
Line 1 gives a date and time stamp for when the trace started. Function entry and function exit lines always contain a time stamp at the beginning of the line. The next item is the function name. Function entry points declare all the parameters passed to them when they are called. Lines 2 and 3 show this. Each value matches up, in order, to the parameters passed to the function call. The function exit point (line 4) always has 'exit' after the function name and declares the return code from the function together with any server errors or network errors. Line 5 gives more details of the return from the Telephony server prior to translation by the API code. Lines 6, 7 and 8 show the actual returned data. In this case line 6 shows the session handle that was created, the phone line that it is connected to and the length of the data returned in the buffer. Line 7 declares the data address and line 8 shows the data in Hex, ASCII and EDCDIC with the Hex offset at the start and the ASCII and EDCDIC data delimited by asterisks.

The remainder of the trace shows the sequence of events for the playing of the voice segment. All of the entry and exit points follow the same format. The function IV_Play is not an external API call, but is an internal API call used by many of the play data functions. It also returns the number of bytes played in the 'count=' line.

**TELETRC**

**Component:** Telephony server.

**Version:** 2.0 and above.

**Trace on:** TELETRC <nodename> <std_switches> <component> <instance>

Where <nodename> is the GSI name of the node that you wish to trace, <component> is the component of the telephony server that you wish to trace. Not all telephony server components can be traced using TELETRC. The ones that can be trace are as follows:

- CS = control server.
- SS = statistics server.
- IV = integrated voice functions.
- NIF = network interface.
VP = voice processing.
VR = voice recognition.
TTS = text to speech.
TDD = telephony devices for the deaf.

The <instance> corresponds to the telephony server internal instance number. For the NIF component there is a direct relationship between the instance number and the phone line where the instance number is equal to the phone line minus one. Other components such as VR and VP declare the NIF instance they are connected to near the top of a trace within an 'attach' statement. Alternatively the instance number can be determined by using the SHOWAT utility.

**Trace off:** TELETRC <nodename> <component> <instance>

Where: Any OS/2 command line on the system running DT/2.

Description: Provides standard tracing for all parts of the telephony server.

Output: File TSccnnnn.OUT where cc is the component number (see list below) and nnnn is the instance number.

- Component 0 = GSI interface.
- Component 1 = Control server.
- Component 2 = Trace/debug.
- Component 3 = Statistics server.
- Component 4 = IV (integrated voice).
- Component 5 = NIF (network interface).
- Component 6 = VP (voice processing).
- Component 7 = VR (voice recognition).
- Component 8 = TTS (text to speech).
- Component 9 = TDD (telephony devices for the deaf).
- Component 10 = ADS (ADSI)
- Component 11 = EXT (External Call)

Impact: Impact varies depending on the number of instances being traced and the number of components being traced. Impact will also change depending on the switches set. Setting switch 2 (Bad events) will give the lowest impact although only logging errors may not give enough information. Careful use of the SHOWAT utility will allow you to select the minimum number of telephony server instances that need to be traced.

Results: The output files will contain data from each instance depending on what switches have been set.

Pre-req: None.

Extra: If the instance number is omitted from the command line arguments, then all instances for that component will be traced. If the component is omitted from the command line arguments, then all components will be traced. The file handles for the tracing remain open at all times for performance reasons even after the tracing has been stopped. To get at the data while DT/2 is still running you will need to use the OS/2 TYPE command to type the data to another file. Stopping DT/2 will flush the files and write any remaining information. There is very little information in the trace output that can be interpreted by the user, however, the general flow of events through the telephony server can be established and might be helpful in determining where problems may lie.
The use of the in-memory trace, VS_TRACE_INMEM, is recommended for systems that are very busy or have a lot of disk I/O. The in-memory tracing reduces the disk I/O caused by the tracing.

Another way to cause telephony server tracing to start is to use the Extended Interface Server Trace in the file SSGSI.CFG. This will allow startup problems in the telephony server to be traced where TELETRC cannot yet be run.

SHOWAT

**Component:** Telephony server.

**Version:** 2.0 and above.

**Trace on:** SHOWAT <nodename>

Where <nodename> is the GSI name of the node that you wish to trace. The nodename must be in upper case.

**Trace off:** Not applicable.

**Where:** Any OS/2 command line.

**Description:** To show the internal telephony server instance connection table.

**Output:** Screen.

**Impact:** None.

**Results:** The output is in the form of a table with one line for each phone line in the system. Each telephony server component has its own column. The values can be -1 for no connection or any non-negative number which is the component instance connected to that phone line.

**Pre-req:** None.

**Extra:** This is useful in conjunction with TELETRC for determining which instances of components to trace for a particular phone line or simply to show which resources are currently available to each phone line.

**Note:** Shared resources such as VR and TTS will change their connections dynamically as required. VP connections may change after an application stop/start.

A simple example output for an 8 line system follows:

```
SHOWAT Starting, using GSI GSSSN01
Sess CS TRD SS IV NIF VP VR TTS TDD ADS EXT
0 0 0 0 0 0 0 -1 -1 -1 -1 -1
1 1 0 1 1 1 1 -1 -1 -1 -1 -1
2 2 0 0 -1 -1 -1 -1 -1 -1 -1 -1
3 3 0 0 -1 -1 -1 -1 -1 -1 -1 -1
4 4 0 0 -1 -1 -1 -1 -1 -1 -1 -1
5 5 0 0 -1 -1 -1 -1 -1 -1 -1 -1
6 6 0 0 -1 -1 -1 -1 -1 -1 -1 -1
7 7 0 0 -1 -1 -1 -1 -1 -1 -1 -1
8 8 0 0 -1 -1 -1 -1 -1 -1 -1 -1
```

The data is arranged into columns by resource with the left column indicating the session number. Each session within the telephony server has a line in the table with a number for each resource that it is connected to. The session number directly equates to the phone line - you add one to the session number to get the phone line. Each resource connection has a number associated with it. A -1 indicates that there is no current connection or that the resource is not available in the system. Any non-negative number indicates the instance
number of that resource that the session is connected to. You will also notice that there is an extra ninth session in this example 8 line system. The session is for communicating with the node manager and is always listed as the last session in the table.

### Component Trace

**Component:** Telephony server.  
**Version:** 2.0 and above.  
**Trace on:**  
- TRACE=YES - full trace.  
- TRACE= <std_switches> - selective trace.  
**Trace off:** Remove definition from file.  
**Where:** Insert into the file VSTS.CFG where required for each component that needs to be traced. The text should be added somewhere near the top of the TYPE=<component> statement.  
**Description:** Same as for TELETRC  
**Output:** Same as for TELETRC  
**Impact:** Same as for TELETRC  
**Results:** Same as for TELETRC  
**Pre-req:** None.  
**Extra:** This trace is very similar to TELETRC but is different in that the tracing will start earlier during the telephony server startup phase. This allows tracing to start earlier than would be possible with TELETRC. The disadvantage is that DT/2 has to be stopped to add the tracing to VSTS.CFG.

### Dialogic API Trace

**Component:** Telephony server  
**Version:** 2.0 and above.  
**Trace on:** SET TS_DIALOGIC_TRACE=YES  
**Trace off:** SET TS_DIALOGIC_TRACE=<NULL>  
**Where:** Insert into the file RUNGSI.CMD before the TMSX command.  
**Description:** Provides tracing for Dialogic T1 API calls only.  
**Output:** Screen.  
**Impact:** Medium.  
**Results:** This trace will give timeslot information and details of every Dialogic API function call.  
**Pre-req:** None.  
**Extra:** This trace is only valid for debug T1 NIF code which would be supplied as needed. There is no equivalent trace for analog and Aculab E1 code.
Memory Allocation Switch

Component: Telephony server.
Version: 2.0 and 2.0.1 only.
Trace on: SET TSMEM_PROTECT=YES
Trace off: SET TSMEM_PROTECT=<NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Changes the way that DT/2 allocates memory from C runtime malloc() to OS/2 DosAllocSeg().
Output: None.
Impact: Very low.
Results: Not applicable.
Pre-req: None.
Extra: This trace allows the tracking of memory violation problems which wouldn't otherwise be visible using the C runtime memory allocation. Using the OS/2 allocation, all memory violations will be reported as a Trap in the module that caused the problem. There is no visible notification that this trace is running, nor is there any trace file output.
Note: There will be an increase in memory usage when using OS/2 allocation. There may also be circumstances where OS/2 runs out of segment selectors in very large systems.

Sequence Number Addition

Component: Telephony server.
Version: 2.0 and above.
Trace on: SET TS_SEQ_TRACE=YES
Trace off: SET TS_SEQ_TRACE=<NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Adds a sequence number to each telephony server trace line to allow synchronisation.
Output: Will be to the standard TELETRC file.
Impact: Same as for TELETRC
Results: A unique number is added to each trace file line.
Pre-req: TELETRC needs to have started a trace for this trace to take effect.
Extra: Only works in conjunction with standard telephony server tracing (TELETRC or TRACE= ). This trace can be helpful for timing related problems or where there are issues about the order of traces in the trace files. The short sample below shows the sequence numbers that are added to a telephony server trace when this trace switch is enabled:
Telephony Server Memory Allocation Switch

**Component:** Telephony server.

**Version:** 2.0 and 2.0.1 only.

**Trace on:** SET TSAPIMEM_PROTECT=YES

**Trace off:** SET TSAPIMEM_PROTECT=<NULL>

**Where:** Insert into the file RUNGSI.CMD before the TSMX command.

**Description:** Changes the way that the telephony server API calls allocate memory from C runtime malloc() to OS/2 DosAllocSeg().

**Output:** None.

**Impact:** Very low.

**Results:** Not applicable.

**Pre-req:** None.

**Extra:** This acts in the same way as TSMEM_PROTECT before except that the telephony server API is affected instead.

Parameter Processing Trace

**Component:** Telephony server.

**Version:** 2.0 and above.

**Trace on:** SET TS_PRM_TRACE=YES

**Trace off:** SET TS_PRM_TRACE=<NULL>

**Where:** Insert into the file RUNGSI.CMD before the TMSX command.

**Description:** Provides details of parameter processing at telephony server startup.

**Output:** Standard TELETRC files.

**Impact:** High.

**Results:** Will be details of the parameter files being read and information on setting up the internal parameter tables.

**Pre-req:** D= trace must be set in the file SSGSI.CFG for the telephony server statement.

**Extra:** Output for this trace will usually all end up in the file TS000000.OUT. For each parameter read from the country files there will be an entry very similar to the following sample:
Enter GetCfgValue
Enter prmgetcardvalue
Enter prmgetvalue
found in default data
Parm FLCH value 38
Exit prmgetvalue RC=0
Exit prmgetcardvalue RC=0
Board parameter FLCH = 38
Exit GetCfgValue RC=0

For each parameter, the trace logs the four character mnemonic for the parameter that is used internally to the telephony server and its value. It also logs whether the parameter is a board parameter, i.e. a parameter that applies to all channels on a voice board, or a channel parameter, i.e. a parameter that applies to just one channel on a voice board.

---

**Place_a_Call Trace**

**Component:** Telephony server.

**Version:** 2.0.1 and above.

**Trace on:** LOG_PLACECALL

**Trace off:** Remove definition from file.

**Where:** Insert into NIF statements in the file VSTS.CFG

**Description:** Provides details of success or failure on Place_a_Call actions together with the call progress results.

**Output:**

- File NIFAPCAL.OUT - analog systems.
- File NIFTPCAL.OUT - digital T1 systems.
- File NIFEPCAL.OUT - digital E1 systems.

**Impact:** Low.

**Results:** The file will contain full details on the currently defined tones for the whole system plus the values of the outbound dialling NIF parameters (one set for each phone line in the system). Then for each phone line in the system there will be details on the phone number called, call timings, call progress status and call analysis results.

**Pre-req:** None.

**Extra:** Useful for determining success rate for enhanced call progress results which can then be used to tune the parameters for a particular system. The output file is opened in append mode so that new data is always added at the end. This statement is not preserved during configuration and will need to be replaced as required after running configuration.

The following is an example output from running with this trace enabled. The output is in two parts. The first part is the system initialisation trace which shows the user defined tones and templates which apply to the whole system and the Call Progress Analysis (CPA) parameters that apply for each line in the system. The second part consists of an individual entry for each call placed and details of the results from that call.

This example is part of the system initialisation part of the trace:
System initialised on 1995-01-26 at 16:22:33

User Defined Tones -
Hangup Tones - 1
HUP1 type sing-dur f1= 400 f1dev= 100 f2= 0 f2dev= 0
ontime= 60 ondev= 0 offtime= 0 offdev= 0 edge=None rep=0 val=1
Dial Tones - none
Busy Tones - none
RingBack Tones - none
Fax Tones - none
User Defined PAMD & PVD templates -
User defined templates

Line 01 16:22:35 Enhanced CPA Initialised
Dialogic Call Analysis Parameters at 0307:5A2F
ca_nbrdna=4, ca_stddevly=25, ca_cnosig=4000, ca_lcdly=400
ca_lcdly=10, ca_hedge=2, ca_cnosil=650, ca_loqtol=13
ca_loqtol=12, ca_lo2tol=13, ca_hihi=13, ca_hihi=13
ca_hihi=13, ca_lo2bmax=90, ca_lo2bmax=90, ca_hihi=90
ca_nbsb=0, ca_loqtl=15, ca_hihi=19, ca_loqtol=225
ca_loqtol=90, ca_intflg=4, ca_intflg=0, ca_fmax=0
ca_fmax=0, ca_devmax=0, ca_smpsize=0, ca_hihi=90
ca_closmax=700, ca_blowmax=530, ca_nbrbeg=1, ca_hihi=78
ca_loqtol=53, ca_lowerf=900, ca_upperf=1000, ca_timefr=5
ca_rejctfr=0, ca_maxans=1000, ca_ansrdgl=150, ca_pvdmax=0
ca_pvdmax=0, ca_pvdmax=0, ca_mxtimefmax=50, ca_lower2f=1350
ca_upper2f=1450, ca_time2f=5, ca_mxtime2f=50, ca_lower3f=1725
ca_upper3f=1825, ca_time3f=5, ca_mxtime3f=50, ca_dtnp=0
ca_dtnp=0, ca_dtnpen=300, ca_dtnpenoff=10, ca_pamfaintime=400
ca_pamfrp=190, ca_pamfrp=190, ca_pamfrp=0, ca_pamfrp=300
ca_pamfrp=300, ca_maxintering=300

Telephony Server NIF Parameters
ans m/c time=400, dial tone wait=3, dial tone dur=0

This example is one statement for an individual call. Each entry contains four lines as follows:

Line 01 call L21 16:29:59-16:30:12 EnhCPA Answer m/c (PVD-TIME)
[TT= 10 F1= 0 S1= 0 L1= 0 AS= 466
CT= 3 DF= 0 D1= 0 F2= 0 D2= 0 F3= 0 D3= 0
ER= 0 ST= 0 ID= 0]

The first line gives the main details of the Place_a_Call attempt. A breakdown of the information is as follows:

- **Line 01** - the line making the call.
- **call L21** - the number dialled (note this may have a 'L', 'I' or 'X' dialtone character suffixed to it if enhanced CPA is active).
- **16:29:59-16:30:12** - the time the call started and completed, if dialtone detection is 'N' or 'W' three times are given, the middle time is the time dialtone was detected and dialling started.
- **EnhCPA / StdCPA** - the type of CPA being used. EnhCPA is enhanced call progress and StdCPA is standard call progress.
- **Answered (PVD)** - the result of the place call attempt, PVD=positive Voice Detect, CAD=cadence break. Some other possibilities are:
  - Answered (CAD)
  - Busy
  - No answer
  - Answer m/c (PVD-TIME)
  - Fax

The next three lines give extra information about the CPA and the information represents the contents of the Dialogic Call Progress Analysis Results structure. The mnemonics are defined as follows:

- **TT** = Termination reason - can be one of the following:
  - 7 - Line busy
  - 8 - No answer

Appendix D. Telephony Server Traces D-9
9 - No ringback
10 - Call connected
11 - Operator intercept
12 - Call analysis stopped
17 - No dialtone detected
18 - Fax tone detected
100 - Call analysis error

FO = % of frequency out of bounds
F1 = first frequency
SH = duration of non-silence
SL = duration of shorter silence
LL = duration of longer silence
AS = duration of answer

CT = connection type - can be one of the following if the termination reason was 'call connected':
  1 - Cadence Break
  2 - Loop Current Drop
  3 - Positive Voice Detection
  4 - Positive Answering Machine Detection

DF = character that failed dial tone detection
D1 = duration of first frequency
F2 = second frequency
D2 = duration of second frequency
F3 = third frequency
D3 = duration of third frequency

ER = error code - can be one of the following when the termination reason was 'call analysis error':
  1 - Firmware Memory error
  2 - Timeout waiting for SIT tone
  3 - SIT tone too long
  4 - Unexpected SIT tone
  5 - Invalid value specified in ca_mftimeqfreq of DL_CSB
  6 - Invalid value specified for upper frequency
  7 - Lower frequency greater than upper frequency
  8 - Overlap in selected SIT tones

ST = reason for call progress to stop - can be one or more of the following hexadecimal values logically ORed together and used as a bit field:
  0x0001 - Max digits received
  0x0002 - Max. silence exceeded
  0x0004 - Max. non-silence exceeded
  0x0008 - Loop current drop
  0x0010 - Max. inter-digit delay exceeded
  0x0020 - Max. time elapsed
  0x0040 - Terminating digit received
  0x0080 - Pattern match detected
  0x0100 - Stopped by user
  0x2000 - Tone Event Occurred

ID = tone ID that caused the termination
Voice Recognition Scores

Component: Telephony server.
Version: 2.0 and above.
Trace on: LOG_SCORES
Trace off: Remove definition from file.
Where: Insert into VR statements in the file VSTS.CFG
Description: Provides voice recognition accuracy results in tabular form.
Output: File VRSCORES.OUT.
Impact: Low.
Results: See Extra: for a full description.
Pre-req: None

Extra: The output file is opened in append mode so that new data is always added at the end. This statement is not preserved during configuration and will need to be replaced as required after running configuration. The following information provides a full description of what data can be expected and how it can be interpreted.

The VR score trace file contains startup, or initial, information and then the individual response information. An example of the initial information is shown below:

Board VRX80 VRM40 (VCS)
Board VRX81 VRM2C (VCS)
NAENG56.VEB USEN62.VEB
Inst 0 max=3000 delta=5 VR_CHBEEPDUR=5 VR_CHTCOUNT=2 VR_TIMEDELAY=200 ...
Inst 1 max=3000 delta=5 VR_CHBEEPDUR=5 VR_CHTCOUNT=2 VR_TIMEDELAY=200 ...
Inst 2 max=3000 delta=5 VR_CHBEEPDUR=5 VR_CHTCOUNT=2 VR_TIMEDELAY=200 ...
Inst 3 max=3000 delta=5 VR_CHBEEPDUR=5 VR_CHTCOUNT=2 VR_TIMEDELAY=200 ...
Inst 4 max=3000 delta=5 VR_CHBEEPDUR=5 VR_CHTCOUNT=2 INITSDUR=200 ...
Inst 5 max=3000 delta=5 VR_CHBEEPDUR=5 VR_CHTCOUNT=2 INITSDUR=200 ...  

This example shows a system with 6 lines of VR, 4 lines of discrete on a VRM/40 module and 2 lines of continuous on a VRM/2C module. Also, the the vocabulary files installed on each board and the parameter settings are shown (for the purposes of this text and due to line length constraints, some lines are truncated throughout as indicated by an ellipse ". . .". The parameter settings are shown for each channel or instance of a VR resource. An instance refers to the Telephony Server process supporting a given VR channel. Instance 0 corresponds to the first VR channel in the system. To see which VR instance is supporting which port, or phone line, see the VR scores trace as described below.

Following the initial information is the individual response data. An example of this is shown below:

09-13 11:06:11 VR00 NIF08 Voc 3 - resp (wd:scr:id) (8: 540: 7) ...

The NIF Instance shows which DT/2 port is using the VR instance. The NIF Instance usually corresponds to the physical port (line 8 in this case).
instance number is zero based and, therefore, one less than the actual port number. The subvocabulary number shows which set of words or subvocabulary is active for this given attempt. The contents and composition of the subvocabularies for a given language vocabulary are defined in the text file associated with the vocabulary name. The text file name is the same as the vocabulary name except that the second letter of the extension is "T" instead of "B". For example, the text file for the two vocabularies loaded in this example would be NAENGST6.VT2 and USENG2.VT3.

The Response Information Area shows the results of the individual recognition attempt. If the recognizers were unable to recognize the caller's utterance, this area will show the reason. Some of the possible reasons are:

- "marginal quality"
- "time exceeded"
- "spoken too soon"
- "spoken too soft"
- "hangup detected"
- "voice stop"
- "line noise"
- "multi-bad reasons"

If the utterance was recognized for a discrete recognition, the following will be returned in this area:

```
resp (wd:scr:id) {4: 325: 3} {0: 606:10} - ok
```

The "resp" keyword indicates a successful recognition. The Key field shows the format of the subsequent recognition results. "wd" stands for word and this is the character returned to the application.

The actual character associated with a given vocabulary word is determined by the template files. The template file name is the same as the vocabulary name except that the two letters of the extension are "TP" instead of "VB". For example, the template file for the two vocabularies loaded in this example would be NAENGST6.TP2 and USENG2.TP3.

"scr" stands for score and this is the score value returned from the recognition firmware. The score is an indication of how closely the utterance matched the word in the subvocabulary. A lower score indicates a better (more reliable) match. The range of acceptable scores varies by vocabulary, subvocabulary, caller, and phone line. However, at a given installation it can be expected that the majority of callers with successful recognition will fall into the same range of scores. A range usually spans 300-400, regardless of the starting point or lower end value.

"id" indicates the zero based index of the recognized word. The word associated with a given index is documented in the appropriate text file (.VTx as described above).

In the example above, the best match to the caller's utterance was "4" with a score of 325 and this word is the fourth entry in the subvocabulary. The second best match to the caller's utterance was "0" with a score of 606 and this word is the eleventh entry in the subvocabulary.
It is important to remember that regardless of the score value, voice recognition will return the correct word in nearly all cases. The primary goal is always to return a correctly identified word and not to achieve a given set of scores. The scores are unimportant to a caller. The scores and traces can help to identify particular problem areas. This trace is most useful for determining the range of good responses and this in turn determines the values to set for Acceptance Threshold and Minimum Difference to help filter invalid responses. See the Voice Application Developers Guide for further discussion on testing VR and determining parameter settings.

Finally, the response information includes recognition results which can have the following contents:

"ok"
"cut-thru"
"ambiguous"
"voice-stop"

If the utterance was recognized for a continuous recognition, the following will be returned in the Response Information Area:

04-19 10:39:06 VR04 NIF00 Voc 2 - continuous:-
   Hypothesis 1, score   0 - 123456
   Hypothesis 2, score 46574 - 123446

The "continuous:" keyword indicates a continuous recognition attempt. This will be followed by the results of the attempt. If the recognition was successful, the first two choices, or hypotheses, will be returned along with their scores. The first string always has a score of 0. The second string will have non zero score. Scores for continuous recognition are not used in the same wasy as for discrete as there is no acceptance threshold. The score is used for comparison purposes only.

If the recognition was not succesful, the reason will be returned. The possible reasons are listed below.

"max time termination"
"no strings recognised"
"marginal quality recognition"

Below is an example of a number of discrete responses and their scores.
When doing a test for an installation, many more samples should be taken to ensure a statistically sound base. However, for this example we will assume that the set below represents a very large sample. Please note that in order to fit the entries on a line in this text the date and time stamp have been removed.

VR00 NIF08 Voc 1 - resp (wd:scr:id) (H: 173: 8) (C: 484: 3) - ok
VR00 NIF08 Voc 1 - resp (wd:scr:id) (N: 134: 6) (Y: 249: 5) - ok
VR00 NIF08 Voc 1 - resp (wd:scr:id) (Y: 198: 5) (N: 233: 6) - ok (cut-thru)
VR01 NIF10 Voc 1 - resp (wd:scr:id) (T: 140: 4) (Y: 452: 0) - ok
VR00 NIF08 Voc 1 - time exceeded
VR00 NIF14 Voc 1 - resp (wd:scr:id) (T: 114: 4) (Y: 430: 0) - ok
VR00 NIF14 Voc 1 - resp (wd:scr:id) (T: 235: 4) (Y: 642: 0) - ok (cut-thru)
VR00 NIF03 Voc 1 - resp (wd:scr:id) (H: 132: 8) (C: 382: 3) - ok (cut-thru)
VR00 NIF03 Voc 1 - time exceeded
VR00 NIF12 Voc 1 - resp (wd:scr:id) (T: 125: 4) (Y: 515: 0) - ok
VR00 NIF12 Voc 1 - resp (wd:scr:id) (Y: 113: 0) (N: 250: 6) - ok
VR00 NIF08 Voc 2 - resp (wd:scr:id) (B: 106: 7) (T: 216:10) - ok
VR00 NIF08 Voc 2 - resp (wd:scr:id) (7: 152: 6) (9: 182: 8) - ok
VR00 NIF08 Voc 2 - resp (wd:scr:id) (6: 94: 5) (5: 181: 4) - ok (cut-thru)
VR00 NIF08 Voc 2 - resp (wd:scr:id) (5: 147: 4) (3: 295: 2) - ok (cut-thru)
VR00 NIF08 Voc 2 - resp (wd:scr:id) (4: 135: 3) (3: 189: 2) - ok (cut-thru)
VR00 NIF08 Voc 2 - resp (wd:scr:id) (3: 145: 2) (4: 200: 3) - ok
VR00 NIF08 Voc 2 - resp (wd:scr:id) (2: 121: 1) (3: 273: 2) - ok
It is very important when testing recognition that your callers follow a prescribed set of words. You must be able to match the order of a caller’s utterance with the results in the trace. You can follow the progress of a given caller by looking at the responses traced on given NIF instance. A NIF instance will be the same for the duration of a call.

The trace above shows that there was testing against three subvocabularies in the loaded vocabulary. Almost all of the calls were using VR instance 0 which is the discrete recognizer on a VM/40 using the NAENGST6.VB2 vocabulary as recorded at the beginning. Calls came in on different NIF instances or phone lines. Looking at subvocabulary 1 (Yes, No, Stop, Help, and Cancel), we can see that the first choices all fell under a score of 200. This shows very good recognition. Also, the differentiation is good as in no case did the score of a second choice ever fall within the Delta (minimum difference) value of the first choice. The same is true for the testing of subvocabulary 2.

Subvocabulary 3 had higher score ranges and this may be a result of any number of things including a noisy line or background noise on the call, size of the vocabulary or a different caller. A larger subvocabulary will result in generally higher scores as there are more words to match an utterance against. This is especially true with the alphanumeric vocabularies. Use the smallest subvocabulary you can. Again, it is important to know what your caller was trying to say. If the VR was returning 100% correct responses, then the acceptance threshold should be set greater than your highest score. In this case it could be safely set to 2000 or even higher. If the words with scores of,
say, higher than 800 are often incorrect, then the acceptance threshold can be
set to filter these responses and allow the voice program to help the caller and
reprompt for input.

At this point, it is very important to remember that this trace and the score
values are tools to determine the best parameter settings for a given
installation. Do not lose sight of the only objective that is important - correctly
recognizing a caller's utterance. If the VR is returning correctly the word that
the caller uttered, the score values are immaterial.

### Internal Message Statistics

**Component:** Telephony server.

**Version:** 2.0 and above.

**Trace on:** SET TS_MSGQUE_STATS=YES

**Trace off:** SET TS_MSGQUE_STATS=<NULL>

**Where:** Insert into the file RUNGSI.CMD before the TMSX command.

**Description:** Provides a dump of the telephony server internal message
statistics.

**Output:** File TSMSGQ.STS

**Impact:** Low

**Results:** Gives statistics for the internal messages used for communication
between the various components of the telephony server.

**Pre-req:** None.

**Extra:** The file will be written to when DT/2 is shut down. An example output
from just one call is shown below:

<table>
<thead>
<tr>
<th>Comp</th>
<th>Inst</th>
<th>Msgs Sent</th>
<th>Msgs Recv</th>
<th>TIMEOUT</th>
<th>OVERFLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>000</td>
<td>36</td>
<td>36</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>00</td>
<td>001</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>01</td>
<td>000</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>01</td>
<td>001</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>03</td>
<td>000</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04</td>
<td>000</td>
<td>44</td>
<td>45</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04</td>
<td>001</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>05</td>
<td>000</td>
<td>20</td>
<td>17</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>05</td>
<td>001</td>
<td>10</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>06</td>
<td>000</td>
<td>31</td>
<td>32</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>06</td>
<td>001</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>168</td>
<td>168</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total msgs malloc 4
Total msgs perm 88
Total msgs 92

Total lng malloc 312
Total lng perm 1716
Total lng 2028

Max msg lng malloc 78
Avg msg lng malloc 78
Max msg lng permed 42
Avg msg lng permed 19
HWM msg permed 4

The first part of the trace output consists of a table that lists all of the components and their instances currently running in the telephony server. For each instance, the number of messages sent and received are logged together with and timeout or overflow conditions. The remainder of the trace gives details on totals and averages. There can be two types of messages. A malloc message is a longer message that was allocated using dynamic storage in the C runtime code. A permed message is one that is short enough to be stored in static storage in the code data area. This is more efficient for shorter messages. In the output text 'lng' means length and 'HWM' means high water mark which is an indicator of the volume of permed messages being received.

Internal Message Trace

Component: Telephony server.
Version: 2.0 and above.

Trace on:

SET TS_MSGQUE_TRACE=YES - normal trace
SET TS_MSGQUE_TRACE=DATA - extra trace with message data

Trace off: SET TS_MSGQUE_TRACE=<NULL>

Where: Insert into the file RUNGSI.CMD before the TMSX command.

Description: Provides tracing of the telephony server internal messages.

Output: File TSMSGQ.OUT.

Impact: Low to medium.

Results: Every message sent within the telephony server is traced with full details of the message.

Pre-req: None.

Extra: The DATA option on the trace also traces the actual data sent with the message. A short piece of a sample DATA trace is shown below from a system that is playing voice:

SS 0 GetMsg() MOVE
NIF 0 PutMsg() -> IF inst 0 MOVE
    NIF 0 OK return PutMsg()
NIF 0 GetMsg() LOCATE
    IF 0 OK return GetMsg()
    0000 02001000 00000000 00000000 00000000 *.................*
    0010 00000000 *...* *
    IF 0 PutMsg() -> IV inst 2 LOCATE
    IF 0 OK return PutMsg()
IF 0 GetMsg() LOCATE
    IV 2 OK return GetMsg()
    0000 01000200 09000F00 02000000 7A003000 *...............z.0*
    0010 484C6F454C6C202020202020202020 *KLINGON*
    0020 4D454C6C2E5347652068656C6C *MENU.SGe hell*
    0030 6F62202020202020202020 *o ....*
    IV 2 PutMsg() -> IF inst 0 MOVE
    IV 2 OK return PutMsg()
    IF 0 OK return GetMsg()
    0000 02001000 00000000 00000000 02000000 *.................*
Diagnostic Recording

Component: Telephony server.

Version: 2.0.1 ServicePak UR42208 and above.

Trace on:

```
DIAG_RECORD = "R,P,D"
DIAGREC <gsi_name> START <line>
```

Trace off:

```
DIAGREC <gsi_name> STOP <line>
```

Where: Insert the DIAG_RECORD statement into the file VSTS.CFG in the NIF section. The DIAGREC command should be run from any OS/2 command line in the DTALK directory.

Description: Provides a diagnostic voice recording of a specific telephone line for any part of a call.

Output: File Rxxxxxxx.Vnn where xxxxxxx is the date and time when the recording was started and nn is a sequential number starting with 01, 02, 03 etc.

Impact: Low.

Results: Provides a binary voice file recorded at 64KBs of all voice and noise on the selected line.

Pre-req: None.

Extra: The diagnostic recording utility allows you to record all activity on a phone line while a call is in progress including the call placement. This can be extremely useful to analyze what happens during Place_a_Call actions, analysis of caller hang-up detection problems, and other troubleshooting. These recordings can also be analysed by Dialogic to determine exact tone frequencies and cadences. Diagnostic recording is supported on both analog and digital connections. (Playback of recordings requires an analog phone connection.)

WARNING: This facility has a significant limitation. When the feature is being used, any of the normal voice recording features provided by DirectTalk, such as the Voice Segment Editor, the Take_a_Message action, or the Record_Voice action will not work and cannot be used on any line on the DirectTalk/2 system (not just the line being recorded). You must, therefore, ensure that all other lines are inactive when doing a diagnostic recording.

Diagnostic recording requires the use of a channel or timeslot on the same Dialogic PEB as the phone line you wish to record. This PEB channel must be dedicated to performing the recording and is not available for normal DirectTalk/2 use when it is being used for diagnostic recording. Please note that the PEB channel does not actually require an attached phone line i.e. a second phone line is not required.

To set up the system for diagnostic recording, add the following line to the NIF section of the telephony server configuration file VSTS.CFG:
DIAG_RECORD = "R,P,D"

The parameter string must be specified in quotes as shown. The parameters are defined as follows:

- **R** - the PEB channel to dedicate to performing the recording. This parameter is required and is a number from 1 to n where n is the highest phone line available on the system.

- **P** - the phone line where the Place_a_Call analysis recording is to be done. This parameter is optional and should not be used if general recording is to be done. If specified, all Place_a_Call activity on this line is recorded.

- **D** - the delay (in ms) before the Place_a_Call recording will start. This optional parameter allows the recording to bypass the wait for dialton and the sending of the dial string (dialling the digits).

To start general recording, issue the following command from an OS/2 command line:

```plaintext
DIAGREC <gsi_name> START <line>
```

Where `<gsi_name>` is the node name for the system and `<line>` is the line you wish to record.

To stop general recording, issue the following command from an OS/2 command line:

```plaintext
DIAGREC <gsi_name> STOP <line>
```

DIAGREC is located in the `\DTALK` directory. It is shipped as part of ServicePak UR42208. All recording is done at 64KBs which can consume significant amounts of disk space. Recordings are saved in the `\DTALK` directory and cannot be redirected elsewhere.

To play back a recording, use the PLAYVOX utility. Note that this utility will only work on an analog phone line (no T1 or E1 connections).

---

**Diagnostic Recording Playback**

**Component:** Telephony server.

**Version:** 2.0.1 ServicePak UR42208 and above.

**Trace on:** PLAYVOX <file_name>

**Trace off:** N/A

**Where:** The utility should be run from any OS/2 command line in the DTALK directory.

**Description:** Provides playback for a recording made with the Diagnostic Recording utility.

**Output:** Phone handset.

**Impact:** None.

**Results:** Plays back the voice recording to check the recording was good.

**Pre-req:** None.

**Extra:** The PLAYVOX utility allows you to play back a voice recording previously made with the Diagnostic Recording utility. The program requires just one command line argument which is the name of the file to play. PLAYVOX requires the use of the first phone line which must be analog (no T1 or E1).
You will be prompted to call line 1 to listen to the recording. To ensure that line 1 is available for use by PLAYVOX, DirectTalk/2 must be stopped or any application running on that line must be stopped from the Node Manager. PLAYVOX does not support any phone line other than line 1. PLAYVOX is located in the \DTALK directory and is shipped with ServicePak UR42208.

**Note:** PLAYVOX is only designed to play back voice recordings made by the Diagnostic Recording utility. Any other ability it may possess to play other types of voice recording is purely coincidental.
Appendix E. GSI Traces

This section covers traces that are applicable to the General Server Interface.

**Note:** In Node Manager windows which show individual paths the ‘Selected’ Menu contains a ‘Trace’ item, and the windows which display individual paths contain a ‘Trace’ pushbutton; either of these may be used to start/stop GSI path traces. This allows tracing on remote systems where you could then use the batch node manager to retrieve the trace output file.

Select from the following:
- Extended Interface Server Trace
- GSI Client Trace
- Timed GSI Client Trace
- GSI Dump with OS/2 Trap
- GSI Dynamic Snap Dump
- GSI Startup Trace
- GSI Performance Ratings
- GSI APPC Simulator
- GSI APPC Simulator Dump
- GSI APPC Host Response Timeout
- GSI APPC Wait for Host Data

## Extended Interface Server Trace

**Component:** GSI.

**Version:** 1.1 and above.

**Trace on:** D= <std_switches>

**Trace off:** Remove definition from file.

**Where:** Insert into the required statement in the file SSGSI.CFG

**Description:** Provides extended interface server tracing.

**Output:**

- Node - TMSXnn.OUT (1.x and 2.x) where nn is the path number.
- Telephony server - See TELETRC for details (2.x only)
- Voice server - VMSVASRN.OUT (1.x only)
- 5250 EHLLAPI emulator - File VS5250EH.OUT (2.x) TAMS5250.OUT (1.x)
- 3270 EHLLAPI emulator - File VS3270EH.OUT (2.x) TAMSCM32.OUT (1.x)
- 3270 PCMUX emulator - File VS3270MX.OUT (2.x) TAMS3270.OUT (1.x)
- 3270 LUA emulator - File VS3270LU.OUT (2.x) - not in version 1.x
- ASCII emulator - File VSAASCII.OUT (2.x) - not in version 1.x
- Directory manager - File VSDIR.OUT (2.x) TAMSDIR.OUT (1.x)
- Mailbox server - File VSMMAIL.OUT (2.x) TAMSMAIL.OUT (1.x)
- Session monitor - File VSEXEC.OUT (2.x) TAMSEXEC.OUT (1.x)
- Session monitor (2) - File SMNxxx.OUT (2.x URnnnnn onwards) where xxx is the process number for the session being traced.

**Impact:** Variable - depends on switches.

**Results:** Depends on switches. For the telephony server see TELETRC for details.
Pre-req: None.

Extra: Most of the host tracing tends to have a higher impact due to logging of send and receive data. This trace has largely been superceded by the individual component traces documented elsewhere in this information, however, this trace is the only trace that can be used to trace startup problems for any of the servers that comes with the system. Additionally, this trace can also be used for extended interface user servers that have implemented tracing using the ‘trace_sw’ argument passed to the ‘server’ entry point.

Note: The session monitor trace output will only occur if the node trace is turned on. This is required as the session monitor does not have a server entry point.

GSI Client Trace

Component: API
Version: 2.0 and above.

Trace on:

SET VSGSI_TRACE=YES - full trace.
SET VSGSI_TRACE= <std_switches> - selective trace.

Trace off: SET VSGSI_TRACE=<NULL>

Where: Set on a command line before starting individual parts of DT/2 such as the VAD or the node manager. Or insert into the file RUNGSI.CMD before the TMSX command to start tracing for application clients.

Description: Provides GSI client tracing.

Output: File VSGSnnnn.OUT where nnnn is the process ID.

Impact: Medium to high. If switch 4 (I/O Data dump) is turned on, large amounts of data will be logged unless VSGSI_TRACE_TRUNC is set to reduce the data volume.

Results: Depending on the switch settings, the output will consist of session open names, return codes and send/receive data.

Pre-req: None.

Extra: Useful to determine whether any parts of DT/2 or user servers are causing problems within the GSI. The following example shows a part of the output from the trace showing a call to the GSI API function SrqRrsGSP(). The data blocks have been truncated to 32 bytes using VSGSI_TRACE_TRUNC to reduce the amount of data logged to the file.

Enter SrqRrsGSP()
Enter PutNet()

Data to Local
0000 44425345 52564552 16001400 0000F03F +DBSERVER.........* ...............0.*
0010 73797361 63742E74 6245/zerodot/zerodot65 736B3E/zerodot/zerodot/zerodot/zerodot /c5197sysact.tbE.esk>./c5197 /c5197.'./.........,../c5197

Exit PutNet() RC=0
Enter GetNet()

Data from Local
0000 44425345 52564552 00000000 00008402 +DBSERVER.........* ...............0.
0010 2F303120 20202020 04500505 736B3E00 */01 .E.esk>.* ...............*
The first 16 bytes of the data blocks give information on what is happening within the GSI and the server. The first 8 bytes are the name of the server being called, in this case it is 'DBSERVER'. The next two bytes are the request/response code. The request code is present when sending data to the server (the first block of data) and the response code is present when receiving data from the server (the second block of data). In this case the request code is Hex 0016 and the response code is zero. See the section on GSI Request & Response Codes for more information on what the codes mean. The next 4 bytes are used only during a response and are usually used as a secondary response code. The final two bytes are the length of the response - in this case Hex 2B4 bytes.

You will quite often be able to extract other meaningful information from the data of the request which starts at byte 17. For example the first data in a database request is usually the database file name and following that there will be the key request.

Timed GSI Client Trace

Component: API
Version: 2.0 and above.
Trace on:
  SET VSGSI_TIMED_TRACE=YES - full trace.
  SET VSGSI_TIMED_TRACE= <std_switches> - selective trace.
Trace off: SET VSGSI_TIMED_TRACE= <NULL>
Where: Same as for VSGSI_TRACE
Description: Provides GSI client tracing.
Output: Same as for VSGSI_TRACE
Impact: Medium.
Results: Same as for VSGSI_TRACE except that each trace item is timestamped.
Pre-req: None.
Extra: Useful to determine whether any parts of DT/2 or user servers are causing problems within the GSI. Additionally this provides extra timing information over VSGSI_TRACE to help with sequencing problems.

GSI Dump with OS/2 Trap

Component: GSI.
Version: 2.0 and above.
Trace on: SET GSI_DUMP=YES
Trace off: SET GSI_DUMP= <NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Sets up the GSI to dump internals automatically after an OS/2 trap within DT/2.

Output: File <nodename>.DMP.

Impact: None (until the trap)

Results: Provides execution details of all the currently running paths through the GSI.

Pre-req: None.

Extra: The default setting is for the GSI not to dump after a trap. A heavily pruned example GSI dump for a 24 line T1 digital system follows (analog system dumps are very similar):

Dumping internals of GSSSN01 Fri May 19 1995 12:19:02
GSI module TMSXNOAP
Check global locks
thread_start_sem 00A9:0000

Path 1 Entry 00BF:0100 – Local – Server
0000 44425345 52564552 01030003 01000040 +DBSERVER....0+ *............*
0010 00000000 00000000 00000000 5A001000 *...........Z....* ..........1.......
0020 000009FF 64177100 58000000 00000000 *..’d.q,x......*.............*
0030 64040000 00000000 00000000 00000000 *d..................*............
0040 00000000 00000000 00000000 00000000 *............*............*
0050 00000000 00000000 00000000 00000000 *............*............*
0060 00000000 00000000 00000000 00000000 *............*............*
0070 00000000 00000000 00000000 00000000 *............*............*
0080 00000000 00000000 00000000 00000000 *............*............*
0090 00000000 00000000 00000000 00000000 *............*............*
00A0 00000000 00000000 00000000 00000000 *............*............*
00B0 00000000 00000000 00000000 00000000 *............*............*
00C0 54405342 32202020 02010000 50095F82 +TMSX82 ....P...* (){.....&...[b]+
00D0 00000000 00000000 00000000 00000000 *............*............*
00E0 00000000 00000000 00000000 00000000 *............*............*
00F0 00000000 00000000 00000000 00000000 *............*............*

Path Table Extension
0000 4956465F 444253F0 30302020 20200200 +IVF_DB_000 +*...[...[.....[........
0010 44617461 26217365 20736572 76657220 +Database server +*..././././././...
0020 70617468 73202020 20200200 20200200 +paths +*..././././././...
0030 20200200 20200200 20200200 20200200 +*..././././././...
0040 20202020 20202020 20202020 20202020 +*..././././././...
0050 00000000 00000000 00000000 00000000 *............*............*
0060 00000000 00000000 00000000 00000000 *............*............*

... 
00F0 00000000 00000000 00000000 00000000 *............*............*

Path 8 Entry 00BF:0800 – Local NetBIOS Emul – Requester – IN Server path 24
Current module ID – GSI_PT_serv_server_entry
0000 44425345 52564552 00200003 00000040 +DBSERVER....0+ *............*
0010 00000000 00000000 00000000 00000000 *............*............*
0020 00000000 00000000 00000000 00000000 *............*............*
0030 64040000 00000000 00000000 00000000 *............*............*
0040 70100000 00000000 00000000 00000000 *............*............*
0050 00000000 00000000 00000000 00000000 *............*............*
0060 00000000 00000000 00000000 00000000 *............*............*
0070 00000000 00000000 00000000 00000000 *............*............*
0080 00000000 00000000 00000000 00000000 *............*............*
0090 00000000 00000000 00000000 00000000 *............*............*
00A0 00000000 00000000 00000000 00000000 *............*............*
00B0 00000000 00000000 00000000 00000000 *............*............*
00C0 47553533 4E303120 20202020 20202020 +GSSSN01 +*..././././././...
00D0 47553533 4E303120 20202020 20202020 +GSSSN01 +*..././././././...
00E0 00000571A 16000000 00000000 00000000 *............*............*
00F0 00000000 00000000 00000000 00000000 *............*............*

Path Table Extension
0000 47553533 4E303120 696E6532 33202020 +GSSSN01Line23 *....+.<..>.....*
0010 52657175 65737465 72207061 74687320 +Requester paths +*.../././.
0020 66677220 6C6F6661 6667920 61747461 +for locally atta +*..././.
0030 63686664 20636C69 65677473 20202020 +ched clients +*..././.

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Appendix E. GSI Traces

0040 20202020 20202020 00000000 00000000 * ........................*
0050 00000000 00000000 00000000 00000000 * ........................*
... 00F0 00000000 00000000 00000000 00000000 * ........................*

Requester I/O Area
0000 44425345 52564552 16001600 00000300 +DBSERVER........* ........................0.
0010 494E4954 2E53544F 74006266 00000300 +INIT.ST.ts.bf.... ***.++++++.*
0020 00742E68 64000039 35303531 39313231 *.t..hd..950519121* ........................*
0030 38353620 63735F63 616C6C74 79706528 +856 cs_caltypel*   [//**/*]
0040 49292063 735F6361 666C6461 74652831 +1 cs_calldate(1s) ........................[///**/*]
0050 39393530 35313929 20673735F 63616C6C +9950519 cs_calll*   [//**/*]
0060 74696665 28213231 37330329 20673735F +time(121706) cs = ........................*
0070 6170766C 66616065 284E292063 +appname(MAIN) ce = */.hp/_...(+...*

Requester bound table
0000 44425345 52564552 01000000 0018B000 +DBSERVER........* ........................*
0010 56535445 4C455356 01000000 0034B000 +VSTELESV.....4* ........................*
0020 00000000 00000000 00000000 00000000 * ........................*
00F0 00000000 00000000 00000000 00000000 * ........................*

NetBIOS NCB
0000 15001600 000977E 26000000 00000000 * ........................*
0010 00000000 00000000 00000000 00000000 * ........................*
0020 00000000 00000000 00000000 00000000 * ........................*
0030 00000000 00000000 00000000 00000000 * ........................*

****** End of Node ******

Dumping internals of DBSERVER Fri May 19 1995 12:19:07

File Table - Slot 1 in use
0000 25008C02 08000100 53595341 43542E54 +%.......SYSACT.T* ........................*
0010 42450000 00000000 00000000 00000000 +BE. ........................*

Lock Table - Path 6
dec_key_sem 0183:0000
reckey_sem - slot 2 0154:0000
0000 00000000 83010000 00000000 00000000 * ........................* ....c..*

DCB Table - Path 1
0000 564F4943 452E5347 45004600 00000000 +VOICE.SGE.F.....* ........................*

Check global locks
boc_sem 01E6:00FF
file_table_sem 01E8:0000
lock_table_sem 0187:0000

****** End of Server ******

Dumping internals of VSTELESV Fri May 19 1995 12:19:09

Telephony Server Global Data Dump

TNNam=VSTELESV,GCINode=GSNSN01,GCIServer=GSNSN01
CfgFile=VSTS.CFG, MsgLang=E, ShowMsgPrefix=0, NumSessions=25
usInstalledLines=24

Hangup Tone Name Table
Name table handle = 052F:0000
TABLE END - Number records = 0; table size = 4
Dial L Tone Name Table
Name table handle = 053F:0000
TABLE END - Number records = 0; table size = 4
Dial I Tone Name Table
Name table handle = 054F:0000
TABLE END - Number records = 0; table size = 4
Dial X Tone Name Table
Name table handle = 055F:0000
TABLE END - Number records = 0; table size = 4
Busy Tone Name Table
Name table handle = 056F:0000
TABLE END - Number records = 0; table size = 4
RingBack Tone Name Table
Name table handle = 057F:0000
CS Instance Block Dump
Inst Blk at 007:F:1914: comp= 1 inst= 0 session= 0
req= 29636 inst-data=000:0000
  cur req type=0, pos=81, msg tr=0 [0 0 00000000 00000000]
  instance stack usage = 1003 bytes from B192 ...

Control Server Data
CSGDLDAT.C date / time - Feb 20 1995 12:45:15

Session to Server Attachment Table - address 00FF:0000

<table>
<thead>
<tr>
<th>Sess</th>
<th>CS</th>
<th>TRD</th>
<th>SS</th>
<th>IV</th>
<th>NIF</th>
<th>VP</th>
<th>VR</th>
<th>TTS</th>
<th>TDD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>13</td>
<td>13</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>17</td>
<td>14</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
</tbody>
</table>

23 23 0 0 23 4 11 -1 -1 -1
24 24 0 0 -1 -1 -1 -1 -1 -1

NETWORK INTERFACE RESOURCE TABLE - 24 instances, address 0127:0000

<table>
<thead>
<tr>
<th>Status</th>
<th>Sess</th>
<th>GpId</th>
<th>DLLId</th>
<th>NameId</th>
<th>GPrmId</th>
<th>IPrmId</th>
<th>Chan St</th>
<th>Chan End</th>
<th>Type</th>
<th>Ph-Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>-1</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>00000000</td>
<td>1</td>
</tr>
<tr>
<td>...</td>
<td>1</td>
<td>11</td>
<td>3</td>
<td>3</td>
<td>-1</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>00000000</td>
<td>2</td>
</tr>
<tr>
<td>...</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>-1</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>00000000</td>
<td>3</td>
</tr>
</tbody>
</table>

Index 1, Data address=02B7:8201, Name=CSM

Index 2, Data address=02B7:BE00, Name=SNSFIOD

Index 3, Data address=02B7:BE00, Name=SNSIFDD

Index 4, Data address=02B7:BE00, Name=SNSIFDD

Index 5, Data address=02B7:BE00, Name=SNSFIOD

Index 6, Data address=02B7:BE00, Name=SNSFIOD

Index 7, Data address=02B7:BE00, Name=SNSFIOD

DLL NAME TABLE

<table>
<thead>
<tr>
<th>DLLId</th>
<th>Name</th>
<th>Type</th>
<th>Ph-Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

...
Phone Number Name Table
Name table handle = /zerodot15F:/zerodot/zerodot/zerodot/zerodot
Index /zerodot, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=unknown
Index 1, Data address=/zerodot/zerodot/zerodot/zerodot, Name=LINE_01
Index 2, Data address=/zerodot/zerodot/zerodot/zerodot, Name=LINE_02
... Index 24, Data address=/zerodot/zerodot/zerodot/zerodot, Name=LINE_24
TABLE END - Number records = 25; table size = 44

Parameter File Name Table
Name table handle = /zerodot16F:/zerodot/zerodot/zerodot/zerodot
TABLE END - Number records = 0; table size = 40

Config Group Name Table
Name table handle = /zerodot/zerodot7F:1/zerodotDE
Index /zerodot, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=TRD-Built In
Index 1, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=CS-Built In
Index 2, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=SS-Built In
Index 3, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=VSTS.CFG Type= entry 2
Index 4, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=VSTS.CFG Type= entry 3
Index 5, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=VSTS.CFG Type= entry 4
Index 6, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=VSTS.CFG Type= entry 5
Index 7, Data address=/zerodot/zerodot/zerodot/zerodot:/zerodot/zerodot/zerodot/zerodot, Name=VSTS.CFG Type= entry 6
TABLE END - Number records = 8; table size = 40

Sub-Server Name Name Table
Name table handle = /zerodot/zerodot7F:1228
Index 0, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Trace/Debug
Index 1, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Control Server
Index 2, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Statistics/Status M
Index 3, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Dialogic NIF
Index 4, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Dialogic Voice Processing Server
Index 5, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Dialogic Voice Recognition Server
Index 6, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Dialogic Text-to-Speech Server
Index 7, Data address=/zerodot/zerodot/zerodot/zerodot, Name=Integrated Voice Functions
TABLE END - Number records = 8; table size = 40

Stats/Status Dump

Start of Dialogic Digital T1 NIF Device Server Dump

TSDSNIF.C date / time - Feb 20 1995 13:37:05
User defined tones-
  Hangup Tones - none
  Dial Tones - none
  Busy Tones - none
  RingBack Tones - none
  Fax Tones - none
User defined PAMD & PVD templates-
  User defined templates

Record control block at 0000:0000
Inst Blk at 0287:E640: comp= 5 inst= 0 session= -1
  req= 29638 inst-data=0287:E6F8
  cur req type=300, pos=1, msg tr=0 [ 0 0 0000000 00000000]
  instance stack usage = 1346 bytes from 8192

NIF Instance Data at 0287:E6F8
Dialogic DTI/2xx firmware version (DTI2XX.FWL)=35000000
Dialogic DTI/2xx EPROM version=ffffffff
Dialogic VP library version (VOXLIB.DLL)=44100000
Dialogic VP device driver version (DXXXDRV.SYS)=4100000
NIF state=1, Call state=0, Line state=0
Type of line protocol=1, Initial hook state=0
Board num=0, Board name=DTIB0, Board descriptor=768
Timeslot num=0, Timeslot name=DTIBOT0, Timeslot descriptor=769
VP board num=0, VP board name=VOXB0, VP board descriptor=0, PEB timeslot=1
VP channel num=0, VP channel name=VOXB0CD, VP channel descriptor=1
NIF ToneIDs at 0000:0000
Place Call Log File Handle=0000:0000
Hangup pattern maximum non-silence=0 (x10 mS)
Hangup pattern minimum non-silence=0 (x10 mS)
Hangup pattern maximum silence=0 (x10 mS)
Hangup pattern minimum silence=0 (x10 mS)
Hangup pattern iteration count=0
Amount of non-silence for hangup=8 (Secs.)
Amount of silence for hangup=0 (Secs.)
Time to wait for first ANI/DNIS tone=50 (x10 mS)
ANI/DNIS inter tone wait time=30 (x10ms)
Dialogic function default wait time=5 (Secs.)
Enable for outbound calls=1
Answer machine time=400 (x10 mS)
Maximum time to wait for a dial tone=0 (x10 mS)
Call Progress Analysis Type=1, Default Dial Tone Detect=W
Default tone type=
Hook flash character='&', Hook flash time=50 (x10ms)
DTMF anti-talkoff delay=5 (x10 mS), DTMF debounce time=0 (x10 mS)
Far end disconnected flag=1
Immediate start flag for transmit wink=0
Wink delay for transmit wink=0 (x10 mS)
Wink duration for transmit wink=15 (x10 mS)
Immediate start flag for receive wink=0
Maximum duration for receive wink=32 (x10 mS)
Time to wait on dial tone=100 (x10 mS)
Values accepted and unprocessed:
Seizure ack time=20 (x10 mS), Hang up ack time=30 (x10 mS)
Dialogic TCB (internal) at 0287:E753
Dialogic TCB (external) at 0287:E7F8
Dialogic Call Analysis Parameters at 0287:E7BF
Dialogic VP Dump
End of Dialogic Analogue NIF Device Server Dump
All data dumps are provide in 16 byte rows with the data being shown in Hex (with an offset at the start), ASCII and EBCDIC. The ASCII and EBCDIC sections are delimited with asterisks "*". The GSI dump is a complex file consisting of the following sections:

- GSI server path table
- GSI requester path table
- Database server file table
- Database server lock table
- Database server DCB table
- Telephony server general information
- Telephony server tone table
- Telephony server control server instance dump
- Telephony server attachment table
- Telephony server resource table by sub-server
- Telephony server DLL name table
Telephony server phone number name table
Telephony server parameter file name table
Telephony server config group name table
Telephony server sub-server name table
Telephony server NIF device server dump
Telephony server VP device server dump
Telephony server VR device server dump
Telephony server TTS device server dump

**Note:** Depending on the version of your system, the database server dump information may be logged to a separate file called TMSB2.DMP. Later versions of the system will have this facility.

**GSI server path table**

For each server defined in the file SSGSI.CFG, there will be an entry in the dump file for each path belonging to that server if that server supports dumping. The number of paths to the server is defined by the QUANTITY= parameter for the server statement in SSGSI.CFG. Each path is described by a line of text that gives the server path number and whether it is local or remote. The first line of the path entry data gives the name of the server defined to the GSI. The first part of the path table extension section gives the call ID for this path followed by the ASCII description of the path type as defined in the DESCRIPTION= parameter for the server statement in SSGSI.CFG.

**GSI requester path table**

For each requester defined in the file SSGSI.CFG, there will be an entry in the dump file for each of the requester paths. Each path is described by a line of text that gives the requester path, whether it is a local netBIOS path or a remote netBIOS path or a fast path and whether it is 'IN' or 'OUT' of a particular server path number. Only those requester paths that are 'IN' the server are currently connected and executing a command - these are the statements you should look for. The first line of the path entry data gives the name of the requester. The first part of the path table extension section gives the call ID for this path followed by the ASCII description of the path type as defined in the DESCRIPTION= parameter for the requester paths statement in SSGSI.CFG.

The requester I/O area is where the GSI client information is stored. The first 16 bytes of the data block give information on what is happening within the GSI and the server. The first 8 bytes are the name of the server being called, e.g. 'DBSERVER'. The next two bytes are the request/response code. The request code is present when sending data to the server and the response code is present when receiving data from the server. See the section on GSI Request & Response Codes for more information on what the codes mean. The next 4 bytes are used only during a response and are usually used as a secondary response code. The final two bytes are the length of the response.

**Database server file table**

The database server file table lists all of the currently open files that have been requested from the server. Depending on the version of your system, this information may appear in a separate file called TMSB2.DMP.
Database server lock table
The database server lock table contains information on the current file locking that has been set. Up to three locks can be set per file. The lock slots are filled in reverse order from the bottom up. Depending on the version of your system, this information may appear in a separate file called TMSB2.DMP.

Database server DCB table
The database server DCB table lists all of the currently accessible voice system database files and also records the last record index that was accessed within the file. Depending on the version of your system, this information may appear in a separate file called TMSB2.DMP.

Telephony server general information
The general information at the start of the telephony server dump shows the system node name, the configuration file currently being used, the current message language and message prefix mode, the number of telephony server sessions and the number of installed lines.

Telephony server tone table
The telephony server tone table section shows all the currently defined tone detection templates in use that have been defined in the file VSTS.CFG. The tones are grouped by type i.e. Hangup (HUP), dialtone (L, I and X varieties), busy, ringback and fax.

Telephony server control server instance dump
The telephony server control server maintains the system resource attachments. It currently only dumps an instance block for each active instance running.

The top of each instance dump contains an 'Inst Blk' (instance block) data dump. Useful information here is the 'cur req type-' value. This value indicates what the current execution point is in the code (very useful for tracking situations where calls to the telephony server do not return for some reason). Details of useful values are shown below:

0 - Idle (this value is likely to change)
1 - Attach device function
2 - Detach device function
3 - Get status of current session function
4 - Get telephony server status function
5 - Set trace instance switches
6 - Diagnostic recording control

Telephony server attachment table
The telephony server attachment table section shows the current resource availability and attachment matrix. This is exactly the same table that is obtained by using the SHOWAT utility.
Telephony server resource table by sub-server
Each sub-server within the telephony server has a resource table defining how it uses other telephony server resources. The example in this document shows the output from the NIF (network interface) sub-server. Each instance within the sub-server is given one line in the table. The 'Status' column shows the current status of the instance. The 'Sess' column gives the number of the telephony server session that this instance is currently connected to. The session are listed in the attachment table. The 'GpId' column gives the index of the configuration file statement that represents this instance. This index is contained in the Telephony server config group name table. The 'DLLId' column gives the index of the DLL that this instance is executing from. This index is contained in the Telephony server DLL name table. The 'NameId' column gives the index of the name of this sub-server. This index is contained in the Telephony server sub-server name table. The 'Ph-Num' column gives the phone line that this instance represents.

Telephony server DLL name table
The telephony server DLL name table shows the list of DLLs that the individual sub-servers are executing from. Each DLL entry is listed by index and name.

Telephony server phone number name table
The telephony server phone number name table shows the name of each phone line as defined in the file VSTS.CFG. These numbers are usually for reference only and only serve as a text identifier for each line.

Telephony server parameter file name table
The telephony server parameter file name table lists all of the parameter delta change files. Parameter delta change files contain lists of all the parameter values that have been changed from the defaults supplied by the system and are created during telephony server configuration.

Telephony server config group name table
The telephony server config group name table lists the 'TYPE=' statements found in the file VSTS.CFG by index. Some configuration parts are built into the telephony server by default. These will be indicated as such.

Telephony server sub-server name table
The telephony server sub-server name table lists the names of all the sub-servers currently defined in the system by index and ASCII text.

Telephony server NIF device server dump
The NIF device server dump consists of a data dump for each instance currently running in the system. Notable information contained in the dump is the internal revision levels of the Dialogic library DLL (VOXLIB.DLL), DTI/2xx firmware revision level (where installed) and the Dialogic device driver (DXXXDRV.SYS). All the line parameters are then dumped in logical groups which correspond to the parameter settings from the country parameter files.

The top of each instance dump contains an 'Inst Blk' (instance block) data dump. Useful information here is the 'cur req type=' value. This value indicates what the current execution point is in the code (very useful for tracking situations where calls
to the telephony server do not return for some reason). Details of useful values are shown below:

1 - Clear tones stored in the tone buffer
2 - Generate tones on the line
3 - Get tones from the tone buffer
4 - Make call on the line
5 - Wait for incoming call
7 - Get status and other details of line
8 - Set line state (hook state and hangup)
9 - Wait for change in line state
300 - Idle (this value is likely to change)

**Telephony server VP device server dump**

The VP device server dump consists of a data dump for each instance currently running in the system. All the current line parameters are dumped which correspond with the parameter settings from the country parameter files.

The top of each instance dump contains an 'Inst Blk' (instance block) data dump. Useful information here is the 'cur req type=' value. This value indicates what the current execution point is in the code (very useful for tracking situations where calls to the telephony server do not return for some reason). Details of useful values are shown below:

1 - Play Voice
2 - Record Voice
3 - Get Status
4 - Set Channel Parameters
5 - Clear tones stored in the tone buffer
6 - Generate tones on the line
7 - Get tones from the tone buffer
8 - Count the tones in the tone buffer
21 - Idle (this value is likely to change)

**Telephony server VR device server dump**

The VR device server dump consists of a data dump for each instance currently running in the system. All the current line parameters are dumped which correspond with the parameter settings from the country parameter files. Additionally there is a dump of board-level information at the end of the instance dumps.

The top of each instance dump contains an 'Inst Blk' (instance block) data dump. Useful information here is the 'cur req type=' value. This value indicates what the current execution point is in the code (very useful for tracking situations where calls to the telephony server do not return for some reason). Details of useful values are shown below:

1 - Recognise spoken words - discrete
2 - Get information on configuration etc
3 - Recognise string of words - continuous
31 - Idle (this value is likely to change)
Telephony server TTS device server dump
The TTS device server dump consists of a data dump for each instance currently running in the system. All the current line parameters are dumped which correspond with the parameter settings from the country parameter files. Additionally there is a dump of board-level information at the end of the instance dumps.

The top of each instance dump contains an 'Inst Blk' (instance block) data dump. Useful information here is the 'cur req type=' value. This value indicates what the current execution point is in the code (very useful for tracking situations where calls to the telephony server do not return for some reason). Details of useful values are shown below:

1 - Say Text
31 - Idle (this value is likely to change)

GSI Dynamic Snap Dump
Component: GSI
Version: 2.0.1 ServicePak UR44064 and above.
Trace on: TMSBNMGR DUMP_NODE
Trace off: N/A
Where: Any OS/2 command line on the system running DT/2.
Description: Causes the GSI to dump internal data while the system is still running.
Output: As for GSI Dump with OS/2 Trap except that the files have an extension of .SNP instead of .DMP.
Impact: Medium to high. The dump process runs at a lower thread priority to reduce impact to a degree.
Results: Provides execution details of all the currently running paths through the GSI.
Pre-req: None.
Extra: Same as GSI Dump with OS/2 Trap

GSI Startup Trace
Component: GSI
Version: 2.0 and above.
Trace on: SET VS_SCREEN_TRACE=YES
Trace off: SET VS_SCREEN_TRACE=<NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Provides GSI startup tracing.
Output: Screen
Impact: Medium.
**Results:** The startup of the GSI will be traced which will consist of sequential events logged to the screen.

**Pre-req:** None.

**Extra:** This is very useful for real nasty GSI problems where the GSI itself won't start properly. This is distinct from the case where a server won't start correctly where individual server traces would be more appropriate. The screen output can be redirected to a file for subsequent inspection.

---

### GSI Performance Ratings

**Component:** GSI

**Version:** 2.0 and above.

**Trace on:** SET GSI_PERF_TRACE=YES

**Trace off:** SET GSI_PERF_TRACE=<NULL>

**Where:** Insert into the file RUNGSI.CMD before the TMSX command.

**Description:** Provides performance ratings for the GSI.

**Output:** File PERFTnnn.OUT where nnn is the GSI path number.

**Impact:** Low.

**Results:** The results consist of operation timings within the GSI.

**Pre-req:** None.

**Extra:** The output is in a binary format which can be decoded using the program TMSXPERR.EXE. This file is not shipped with the system and would be used for individual cases. A sample output is shown below from a simple case where just two calls were made:

```
<table>
<thead>
<tr>
<th>AVERAGES for RC=0 FUNCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Name</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Data Base</td>
</tr>
<tr>
<td>Data Base</td>
</tr>
<tr>
<td>Data Base</td>
</tr>
<tr>
<td>Telephony</td>
</tr>
<tr>
<td>Telephony</td>
</tr>
<tr>
<td>Telephony</td>
</tr>
</tbody>
</table>
```

---

### GSI APPC Simulator

**Component:** GSI (APPC via portmaster only)

**Version:** 2.0 and above.

**Trace on:** SET TRACE_APPC_SIM=YES

**Trace off:** SET TRACE_APPC_SIM=<NULL>

**Where:** Insert into the file RUNGSI.CMD before the TMSX command.

**Description:** Provides information on the GSI APPC simulator.

**Output:** File TMSXnnn.OUT where nnn is the GSI path number.

**Impact:** Medium.
Results: Gives extra details about the GSI APPC simulator.

Pre-req: Requires D= to be set in the file SSGSI.CFG for the APPC paths statement.

---

**GSI APPC Simulator Dump**

Component: GSI (APPC via portmaster only)

Version: 2.0 and above.

Trace on: SET DUMPTRACE_APPC_SIM=YES

Trace off: SET DUMPTRACE_APPC_SIM=<NULL>

Where: Insert into the file RUNGSI.CMD before the TMSX command.

Description: Provides information on the GSI APPC simulator.

Output: File TMSXnnn.OUT where nnn is the GSI path number.

Impact: High.

Results: As for TRACE_APPC_SIM but with much extra information added.

Pre-req: Requires D= to be set in the file SSGSI.CFG for the APPC paths statement.

---

**GSI APPC Host Response Timeout**

Component: GSI (APPC via portmaster only)

Version: 2.0 and above.

Trace on: SET ALLOCATE_TIMEOUT=nnn where nnn is the time in seconds.

Trace off: SET ALLOCATE_TIMEOUT=<NULL>

Where: Insert into the file RUNGSI.CMD before the TMSX command.

Description: Sets the time to wait for the host to respond during a session open.

Output: None.

Impact: None.

Results: Not applicable.

Pre-req: None.

Extra: The default timeout is 60 seconds.

---

**GSI APPC Wait for Host Data Timeout**

Component: GSI (APPC via portmaster only)

Version: 2.0 and above.

Trace on: SET READ_WAIT_TIMEOUT=nnn where nnn is the time in seconds.

Trace off: SET READ_WAIT_TIMEOUT=<NULL>

Where: Insert into the file RUNGSI.CMD before the TMSX command.

Description: Sets the time to wait for data during host communication.
Output: None.
Impact: None.
Results: Not applicable.
Pre-req: None.
Extra: The default timeout is 6 seconds.
Appendix F. VAD Traces

This section covers traces that are applicable to the Voice Application Developer. Select from the following:

Voice Program Edit Trace
User Action Edit Trace

Voice Program Edit Trace

Component: VAD (voice program editor)
Version: 2.0 and above.
Trace on: SET STE_TRACE=YES
Trace off: SET STE_TRACE=<NULL>
Where: On the OS/2 command line where the VAD is to be run. Then enter VAD and press Enter to initiate the VAD.
Description: Provides voice program edit tracing.
Output: File VAD
Impact: Low.
Results: Consists of module flow plus relevant data blocks.
Pre-req: None.
Extra: A small part from the beginning of an example output from the trace is shown below:

tracing voice program editor
about to check arguments
about to set memory
loading system action table
load action table
actions remaining is = 438
loading user action table
total action count is = 69
Enter SortActionList
Exit SortActionList RC=0
state table loaded
state count is = 13
state table set up
Enter steedt
panel open is
about to display list
Enter dsplist
start is
swth is
mcount is = 13
initialised
state_cnt is = 13
Storage Dump
0000 0A002F50 38000000 00000000 14000A00 *.../08..........* *................* 0010 78000000 00000000 00000000 00000000 *x................* *................*
0020 00000000 00000000 000004265 67696E20 *........Begin * *................>.* 0030 63616C6C 2070726F 63657373 696E6720 *call processing * */%..?.....>.*..
0040 6C6F6F70 00000000 000004331 00000000 *loop......C1....* *??.?............* 0050 00000000 00000000 00000000 43330000 ...........C3..* *................*
0060 00000000 00000000 00000000 00000000 *.................* *................*
0070 00000000 00000000 00000000 00000000 *.................* *................*
0080 00000000 00000000 00000000 00000000 *.................* *................*
cstate is now set
about to sprint
about to find action key
Enter FindActionKey
/08
/08
Exit FindActionKey RC=0
key found = 13
Wait_for_Call
0010 Wait_for_Call Begin call processing loop fp00

Each line of the voice program is listed in the dump as a data dump and as
ASCII text as it would appear on screen. Notable data within the dump are the
first two bytes. These bytes are the line number (in Intel byte- reversed hex) of
this line of the voice program. The action return codes start at offset hex 0C.
Each return code has two bytes which give the number of the voice program
line to go to on receiving that return code. The description line starts at offset
hex 2A.

User Action Edit Trace

Component: VAD (user action editor)
Version: 2.0 and above.
Trace on: SET ACTION_TRACE=YES
Trace off: SET ACTION_TRACE=<NULL>
Where: On the OS/2 command line where the VAD is to be run. Then enter
VAD and press Enter to initiate the VAD.
Description: Provides user action edit tracing.
Output: File ACTEDIT.OUT
Impact: Low.
Results: Consists of module flow plus relevant data blocks.
Pre-req: None.
Extra: A small part from the beginning of an example output from the trace is
shown below:

action table loading
USERACT.TBE
action table loaded
action count is = 7
action count is = 7
Enter edit_actn
Enter act_dsp
BU00001 HostInitialise USER BUCIP001 vmse064 94/05/11
BU00002 HostSend USER BUCIP001 vmse065 94/05/12
BU00003 HostInquiry USER BUCIP001 vmse066 94/05/11
BU00004 HostReceive USER BUCIP001 vmse067 94/05/12
BU00005 GenEnquiry USER BUCIP001 vmse068 94/05/11
BU00006 HostTerminate USER BUCIP001 vmse069 94/05/11
BU00007 BuWriteLog USER BUCIP001 vmse071 94/05/12
action count is = 7
Exit act_dsp RC=7
Enter chngact
Enter LoadCurrentAction
Exit LoadCurrentAction RC=0
This trace shows the information that is displayed on screen together with the
code module entry and exit points. Additionally, if any edit changes are made,
the trace will dump the data to show the change.
Appendix G. Configuration Tracing

This section covers traces that are applicable to DT/2 configuration. Select from the following:

- Setup Program Trace
- Telephony Server Configuration Program Trace
- Configuration Parser Trace

Setup Program Trace

Component: Configuration.
Version: 2.1 and above.
Trace on:
- SET CONFIG_TRACE=YES - full trace.
- SET CONFIG_TRACE=<std_switches> - selective trace.
Trace off:
- SET CONFIG_TRACE=NO
- SET CONFIG_TRACE=<NULL>
Where: On an OS/2 command line before running the DirectTalk/2 setup program.
Description: Provides details of all the operations going on within the DirectTalk/2 program.
Output: File SETUP.OUT.
Impact: Medium to high.
Results: Depends on the switches. Includes module flow and function input parameters and return codes plus other useful data.
Pre-req: None.

Telephony Server Configuration Program Trace

Component: Configuration.
Version: 2.1 and above.
Trace on:
- SET TSCFG_TRACE=YES - full trace.
- SET TSCFG_TRACE=<std_switches> - selective trace.
Trace off:
- SET TSCFG_TRACE=NO
- SET TSCFG_TRACE=<NULL>
Where: On an OS/2 command line before running the DirectTalk/2 setup program.
**Description:** Provides details of all the operations going on within the telephony server configuration program.

**Output:** File TSCFG.OUT.

**Impact:** Medium to high.

**Results:** Depends on the switches. Includes module flow and function input parameters and return codes plus other useful data.

**Pre-req:** None.

---

**Configuration Parser Trace**

**Component:** Configuration file parser.

**Version:** 2.1 and above.

**Trace on:** SET PARSE_TRACE=YES

**Trace off:** SET PARSE_TRACE=<NULL>

**Where:** On an OS/2 command line if you are tracing VSCFG or insert into the file RUNGSI.CMD if you are tracing the telephony server.

**Description:** Provides details of configuration file parsing.

**Output:** For configuration tracing output will be to same file as for CONFIG_TRACE For telephony server tracing output will be to the standard TELETRC file.

**Impact:** High to very high.

**Results:** Full details of function calls with input parameter values and return codes, details of any errors encountered and other useful data such as the statements found in the configuration file.

**Pre-req:** CONFIG_TRACE must be set for configuration tracing and TELETRC or TRACE= in VSTS.CFG or D= in SSGSI.CFG must have been set for telephony server tracing.

**Extra:** This tracing imposes a very high impact on telephony server startup. It is useful for determining problems with parameter settings during configuration and during telephony server startup. The following trace segment is typical of the extra trace added when this tracing is turned on:

```plaintext
Enter CFG_GetStmt
D:\DTALK\TSHARD.CFG
TYPE=
!!!! NULL Event Pointer !!!!
mode = 0
CFG-creating stmt
TYPE=NIF CARD=LS180 DEF_FILE=LSIXXX.NIF TECH=1 ENABLED=1 LINES=8 START=1 END=8:
Exit CFG_GetStmt RC=0
Enter CFG_GetSubStmt
TYPE=NIF CARD=LS180 DEF_FILE=LSIXXX.NIF TECH=1 ENABLED=1 LINES=8 START=1 END=8:
CARD=
!!!! NULL Event Pointer !!!!
mode = 2048
CFG-using default end_type :
CFG-keyword found
CARD=LS180 DEF_FILE=LSIXXX.NIF TECH=1 ENABLED=1 LINES=8 START=1 END=8
Exit CFG_GetSubStmt RC=0
Enter CFG_GetString
CARD=LS180 DEF_FILE=LSIXXX.NIF TECH=1 ENABLED=1 LINES=8 START=1 END=8
CARD=
mode = 0
```
CFG-Keyword found
LSI80
Exit CFGGetString RC=0
Appendix H. Host Communications Tracing

This section covers traces that are applicable to DT/2 host communications.

Note: Host APPC paths are a standard GSI function. Tracing them is provided by setting the appropriate trace in the file SSGSI.CFG.

Select from the following:
- Low Level Host Emulator Trace
- Host Server Trace
- ARTIC Adapter PCMUX Dump

---

Low Level Host Emulator Trace

Component: Host emulators.
Version: 2.0 and above.
Trace on:
- SET EMUL_TRACE=YES - full trace
- SET EMUL_TRACE= <std_switches> - selective trace
Trace off: SET EMUL_TRACE=<NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Provides low level tracing for the host emulators.
Output: File EMUnnn.OUT where nnn is the process ID. Also file CACTnnn.OUT where nnn is the process ID when in the VAD debugger.
Impact: High.
Results: Consists of module flow and send/receive data blocks.
Pre-req: None.
Extra: The amount of data being traced will slow the emulators down somewhat.

---

Host Server Trace

Component: Host server.
Version: 2.0 and above.
Trace on: D= <std_switches>
Trace off: Remove definition from file.
Where: Insert into the file SSGSI.CFG within the host server statement.
Description: Provides tracing for the host server.
Output:
- File VS5250EH.OUT - 5250 EHLLAPI emulation
- File VS3270EH.OUT - 3270 EHLLAPI emulation
- File VS3270MX.OUT - 3270 PCMUX emulation
File VS3270LU.OUT - 3270 LUA emulation
File VSASCII.OUT - ASCII telnet emulation

Impact: Medium to high (depends on switches)
Results: Depends on switches.
Pre-req: None.
Extra: This trace doesn't strictly adhere to the switch settings when outputting trace information.

---

ARTIC Adapter PCMUX Dump

Component: PCMUX
Version: 1.1 and above.
Trace on:
  MOIXTOUT -Cn -Tm (version 1.x)
  RTICTOUT -Cn -Tm (version 2.x)
Where n is the card number and m is the task number on the card.
Trace off: Not applicable.

Where: Any OS/2 command line

Description: This trace dumps the low level SNA information currently stored on the Portmaster card.

Output: Screen.

Impact: Low.

Results: Consists of SNA session connection information.

Pre-req: None.

Extra: Output can be redirected to a file for subsequent inspection. Task 1 and card 0 is the usual task that you would want to get trace for. The following is an example output from task 1 when one host session has been connected and disconnected:

```
****** Status messages for task 1 on device 0 ******
10:45:54.00 GENPSDLC GEN72801 Largest storage block(in para) available=22568
   + Total number of paragraphs available=22568
10:45:54.00 GENPSDLC GEN72101 +General Purpose SDLC Execution-(2.00)++
10:45:54.00 GENPSDLC PSU15201 Registered PID - 222, TID - 15
10:45:54.00 GENPSDLC GEN72201 Createque qnbr=241
   + Associated lus= 0 Associated buffers=0 buffsize 0
10:45:54.00 GENPSDLC GEN7201 Mux Process ID set to 222
10:45:54.00 GENPSDLC GEN72201 Createque qnbr=244
   + Associated lus= 0 Associated buffers=0 buffsize 0
10:45:54.00 GENPSDLC GEN72201 Createque qnbr=243
   + Associated lus= 0 Associated buffers=64 buffsize 282
10:45:54.00 GENPSDLC GEN72201 Createque qnbr=242
   + Associated lus= 0 Associated buffers=64 buffsize 284
10:45:55.00 GENPSDLC GEN70501 Rc from task(2)=0 cmd=31 nbrasap=0
10:45:55.00 GENPSDLC GEN72801 Largest storage block(in para) available=13985
   + Total number of paragraphs available=13985
10:45:55.00 GENPSDLC GEN72201 Createque qnbr=193
   + Associated lus= 0 Associated buffers=0 buffsize 282
10:45:55.00 GENPSDLC PSU52101 Freed TID # - 15
```
Appendix H. Host Communications Tracing

--- 2 discard --*

```
<table>
<thead>
<tr>
<th>0 1 2 3 4 5 6 7 8 9 A B C D E F</th>
<th>EBCDIC</th>
<th>ASCII</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000 0000000 0400A000 C1000000 00000000</td>
<td>........A..............</td>
<td></td>
</tr>
<tr>
<td>0010 0000000 00000000 00000000 00000000</td>
<td>..................</td>
<td></td>
</tr>
</tbody>
</table>
```

10:46:07.00 GENPSDLC GEN7001 oafidx=0
10:46:07.00 GENPSDLC GEN0801I ActPU
10:46:07.00 GENPSDLC GEN08101 ActLU #02, owned by 0000
10:46:07.00 GENPSDLC GEN08101 ActLU #03, owned by 0000
10:46:07.00 GENPSDLC GEN08101 ActLU #04, owned by 0000
10:46:07.00 GENPSDLC GEN08101 ActLU #05, owned by 0000
10:46:07.00 GENPSDLC GEN08101 ActLU #06, owned by 0000
10:46:07.00 GENPSDLC GEN08101 ActLU #07, owned by 0000
10:46:07.00 GENPSDLC GEN08101 ActLU #08, owned by 0000

... ...

10:48:45.00 GENPSDLC PSU15201 Registered PID - 254, TID - 15
10:48:45.00 GENPSDLC GEN04001 session_status: lu num - 07, ...
10:48:45.00 GENPSDLC GEN70901 Opening lu-lu session with lu->lu7<-
10:48:45.00 GENPSDLC GEN71001 lulopen *** Stat=193 task_id=7
10:49:31.00 GENPSDLC GEN71301 Closing up lu 7 for Pid =254
10:49:31.00 GENPSDLC PSU52101 Freed TID # - 15

***** End of Status messages for task 1 on device 0 *****

The top section of the trace is internal information to GENPSDLC. The next section is two lines of 16 bytes of hexadecimal data. These lines will appear in the trace only if the connection to the host is good. If the connection has broken or is not working, then these two lines will not appear which will indicate a host link problem. Next, there should be one entry for 'ActPU' which will confirm the PU connection to the host. Then there will be one 'ActLU' for each host session defined to the PU. This is where you can check to make sure there are enough LU sessions for the number of host sessions being requested. The final section gives details on opening and closing LU-LU sessions. Each host session connection should show an equivalent 'Opening lu-lu session' statement. Sessions problems can be determined from information in this section.

The following is an example output from task 2:

***** Status messages for task 2 on device 0 *****

10:45:54.00 SDLSEC SEC75001 --Start of Signetics Sdlc Execution-(2.00)-*

ART70101 Port 0 is v35
10:45:55.00 SDLSEC SDL00001 Setting UP for external clocking

--- XID Sdlc Parm data ---

```
<table>
<thead>
<tr>
<th>0 1 2 3 4 5 6 7 8 9 A B C D E F</th>
<th>EBCDIC</th>
<th>ASCII</th>
</tr>
</thead>
</table>
```

10:45:55.00 SDLSEC SDL00001 Setting UP for external clocking

--- XID field setting ---*

```
<table>
<thead>
<tr>
<th>0 1 2 3 4 5 6 7 8 9 A B C D E F</th>
<th>EBCDIC</th>
<th>ASCII</th>
</tr>
</thead>
</table>
```

10:45:55.00 SEC79501 rc 0 from operation 31
10:46:08.00 SEC76101 Sent rnr isp=28 rx_avail=5 tx_avail=9
10:46:08.00 SEC76101 Sent rnr isp=28 rx_avail=6 tx_avail=9
10:46:09.00 SEC76101 Sent rnr isp=28 rx_avail=6 tx_avail=9
10:46:09.00 SEC76101 Sent rnr isp=28 rx_avail=7 tx_avail=9
10:46:10.00 SEC76101 Sent rnr isp=28 rx_avail=4 tx_avail=9
10:46:10.00 SEC76101 Sent rnr isp=28 rx_avail=5 tx_avail=9

***** End of Status messages for task 2 on device 0 *****

Useful information to note here is near the top of the trace where the Port type is reported - in this case V35 and the clocking mode is reported - in this case external clocking.
Appendix I. Node Manager Tracing

This section covers traces that are applicable to the node manager and batch node manager. Select from the following:

- Node Manager Internal Trace
- Node Manager User Interface Trace
- Batch Node Manager Trace

### Node Manager Internal Trace

**Component:** Node manager.

**Version:** 2.1 and above.

**Trace on:**

- `SET VSNMI_TRACE=YES` - full trace
- `SET VSNMI_TRACE= <std_switches>` - selective trace

**Trace off:** `SET VSNMI_TRACE=NO` or `<NULL>`

**Where:** On the OS/2 command line where the Node Manager User Interface (VSNMUI.EXE) is to be run.

**Description:** Provides internal tracing of the Node Manager.

**Output:** File VSNMnnn.OUT where nnn is the process ID.

**Impact:** Low.

**Results:** Details of node management operations.

**Pre-req:** None.

### Node Manager User Interface Trace

**Component:** Node manager user interface.

**Version:** 2.1 and above.

**Trace on:**

- `SET NM_UI_TRACE=YES` - full trace
- `SET NM_UI_TRACE= <std_switches>` - selective trace

**Trace off:** `SET NM_UI_TRACE=NO` or `<NULL>`

**Where:** On the OS/2 command line where the Node Manager User Interface (VSNMUI.EXE) is to be run.

**Description:** Provides tracing of the Node Manager User Interface.

**Output:** File NMUI.OUT

**Impact:** Low.

**Results:** Details of user interactions with the Node Manager.

**Pre-req:** None.
Batch Node Manager Trace

**Component:** Batch node manager.

**Version:** 2.0 and above.

**Trace on:**

- SET TMSBNMGR_TRACE=YES - full trace
- SET TMSBNMGR_TRACE=<std_switches> - selective trace

**Trace off:** SET TMSBNMGR_TRACE=<NULL>

**Where:** On an OS/2 command line where the batch node manager is to be run.

**Description:** Traces the operation of the batch node manager.

**Output:** File TMSBNMGR.OUT.

**Impact:** Low.

**Results:** Depends on the switches.

**Pre-req:** None.

**Extra:** The following is the sample output from the trace during a 'status_appls' call to the batch node manager:

```
Enter TMSBNMGR
Execution Parameters:
tmsbnmgr
status_appls
Enter get_env_var
Enter parse_gsi_name
   Env variable GSI_SOURCE not present
   Exit parse_gsi_name RC=0
source - network name=GSSSN01 node name=GSSSN01
Enter parse_gsi_name
   Env variable GSI_TARGET not present
   Exit parse_gsi_name RC=0
target - network name=GSSSN01 node name=GSSSN01
Exit get_env_var RC=0
Enter get_nmgr_func
Enter proc_resource_nums
   set all resource flags = 1
   Exit proc_resource_nums RC=0
source_req_code
   target_req_code = -1/zerodot33
target server
VSEXEC
   Exit get_nmgr_func RC=0
SOURCE GSI req_code
Enter simple_verb
Enter open_gsis
   RC=/zerodot - GSSSN01_NOD_MGR open TARGET session with GSSSN01 - timeout=3/zerodot
Enter get_node_info
Enter srq_rrs
   Send to TARGET GSI req_code = -262
   Receive from TARGET resp_code
   Exit srq_rrs RC=0
GSI is level V2 = 2/zerodot
Exit get_node_info RC=0
Exit open_gsis RC=0
SOURCE GSI req_code
Enter srq_rrs
   Send to TARGET GSI req_code = -127
   Send to TARGET Server ind_req_code = -1033
   !!! GSI HEADER NOT SHOWN
   Receive from TARGET resp_code
   Exit srq_rrs RC=0
Exit simple_verb RC=0
Enter message
```
Exit message RC=0
Exit TMSBMMGR RC=0

All the request and response codes explain what command is being executed at each point. See the section on GSI Request & Response Codes for more information about what they mean.
Appendix J. Dialogic Tracing

This section gives details on what you can do to trace Dialogic software. Select from the following:

INFO tool
DEBUG tool
SHOWINF tool

INFO tool

Component: Dialogic.
Version: System release 4.11 and above.
Trace on: INFO -t
Trace off: Not applicable
Where: Any OS/2 command line.
Description: Provides a formatted dump from the Dialogic card.
Output: Screen.
Impact: Very low.
Results: The output is in the form of a dump which consists of a header and an event trace for each event that has been stored on the card.
Pre-req: None.
Extra: The output can be re-directed to a file. A pruned example output trace is shown below:

OS/2 Generic Driver Information

Dialogic OS/2 Generic Driver
Version 4.10

Number of Board Types: 1
Number of Boards : 2
Number of Devices : 4
Number of Channels : 10
Memory being used : 29504
Longest wait in DXSRM: 6

Board PhysAddr IOAddr IRQ NDevs DevNum Nchans DevName
====================================================================
1 D8000 FFFF 10 2 10 4 <shared>
  1 4 VOXB0
2 DA000 FFFF 10 2 30 4 <shared>
  1 4 VOXB1

Process Table Size: 4224

Process Information

Trace Queue Size: 256
Trace buffer Insertion point: 28
Trace buffer Count : 256
-------------- TRACE BUFFER --------------

VOXB1C1: [SEND] Prot: 2 Time:6395968 State: 2 Message:(19) PC_CLRHIST
VOXB1C1: [SEND] Prot: 2 Time:6395968 State: 2 Message:(19) PC_CLRHIST
VOXB1C1: [SEND] Prot: 2 Time:6395968 State: 2 Message:(05) PC_SETTERMS
VOXB1C1: [SEND] Prot: 2 Time:6395968 State: 2 Message:(07) PC_SETIEN
VOXB0C2: [DAMCONTROL] Prot: 0 Time:6395968 State: 0 Message:(00)
VOXB0C2: [SEND] Prot: 2 Time:6395968 State: 2 Message:(07) PC_SETIEN
VOXB0C2: [SEND] Prot: 2 Time:6396000 State: 2 Message:(07) PC_SETIEN

...
The first part of the trace provides general Dialogic system information such as the number of boards, memory addresses, port IDs, version numbers etc. The second section is a formatted dump from the trace buffer. Each event is shown on one line and consists (amongst other things) of a device ID (e.g. VOXB0C0), a data control word such as SEND or RECV, a time stamp and a message number together with an ASCII representation of the message.

### DEBUG tool

**Component:** Dialogic.

**Version:** Any.

**Trace on:** DEBUG

**Trace off:** Not applicable

**Where:** Any DOS full screen or window.

**Description:** Provides a memory dump from the memory space being used by the Dialogic card

**Output:** Screen.

**Impact:** Very low.

**Results:** The output is in the form of a dump which consists of the bytes of storage at the specified address.

**Pre-req:** None.

**Extra:** The output can be printed using ‘Print Screen’ or if you are using a DOS window, you can use the Mark and Copy options in the system menu for the window to copy an area of the screen into the OS/2 paste buffer. This can then be pasted onto an editor and saved to a file. This tool is, in fact, the DOS
debugger utility. To get more information on what it can do, type ‘?’ on the command line after starting the program. You would normally be doing a memory dump at a specific address e.g. d d800:1e00 which would dump an area of memory to the screen. An example is shown below:

```
D800:1E00 00 00 00 01 20 00 00 00 00-00 00 00 00 00 41 00 00 00 00
D800:1E10 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D800:1E20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D800:1E30 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D800:1E40 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D800:1E50 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D800:1E60 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
D800:1E70 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

---

**SHOWINF tool**

**Component:** Dialogic.

**Version:** System release 4.11 and above with ServicePak UR44064 and above.

**Trace on:** SHOWINF

**Trace off:** Not applicable

**Where:** Any OS/2 command line.

**Description:** Provides a complete description of the Dialogic hardware that was found on the system.

**Output:** Screen.

**Impact:** None.

**Results:** The output is in the form of a table which describes the hardware that was detected by the Dialogic GENLOAD software after a system reboot.

**Pre-req:** None.

**Extra:** The output can be re-directed to a file. An example output trace is shown below:

```
File Created by GENLOAD Version 1.40 Special 1.01.0002
File copyright: "Dialogic System Information File"

The DIALOGIC group contains 3 physical board records divided into
5 virtual boards with 4 feature records and a grand total of 12 devices.

D/121A at 0xD80000; ID = 340; IRQ 3; vbcnt = 3; flags: 0x07; pid: 00003
  VB at 0xD80000 (0x2000 bytes) with 1 feature record
    VOX80: class 0x80; 4 'C' devices; feature ids: 30 01
  VB at 0xD80000 (0x2000 bytes) with 1 feature record
    VOX81: class 0x80; 4 'C' devices; feature ids: 30 01
  VB at 0xD80000 (0x2000 bytes) with 1 feature record
    VOX82: class 0x80; 4 'C' devices; feature ids: 30 01
TTS/xxx at 0xD40000; ID = 350; IRQ 3; vbcnt = 1; flags: 0x06; pid: 00001
  VB at 0xD40000 (0x2000 bytes) with 1 feature record
    VOX90: class 0x90; 0 'C' devices; feature ids: 00
VR/160 at 0xD80000; ID = 34C; IRQ 3; vbcnt = 1; flags: 0x07; pid: 00301
  VB at 0xD80000 (0x2000 bytes) with 1 feature record
    VRX80: class 0x80; 16 'C' devices; feature ids: 30 31
```
Appendix K. Other Miscellaneous Tracing

This section covers traces that are applicable to other parts of DT/2. Select from the following:

- Telephony REXX Trace
- Statistics Server Trace
- Log File Handler Trace
- Message Handler Trace
- Application Trace
- Session Monitor Trace
- Voice Program Trace
- ADSI Parameter Editor User Interface Trace
- ADSI Parameter Editor Database Trace

### Telephony REXX Trace

**Component:** T-REXX

**Version:** 2.0 and above.

**Trace on:**

- `SET TREXX_TRACE=YES` - full trace
- `SET SESSMON_TRACE= <std_switches>` - selective trace

**Trace off:** `SET TREXX_TRACE=<NULL>`

**Where:** On the OS/2 command line where T-REXX is to be run.

**Description:** Provides tracing for the telephony REXX executor.

**Output:** File TRXnnn.OUT where nnn is the process ID.

**Impact:** Medium.

**Results:** Consists of event flow within T-REXX.

**Pre-req:** None.

**Extra:** Useful for tracing any errors that result from the T-REXX program. A pruned sample trace from running MENU.TRX follows:

Enter T-REXX
About to run REXX
Enter InitExit
Enter VarGetSys
RXSHV_PRIV = 0
SOURCE
RXSHV_PRIV_OK
OS/2 SUBROUTINE D:\DTALK\menu.TRX
Exit VarGetSys RC=0
Enter VarPut
RXSHV_SET = 1
TREXX_CMDFILE
.TRX
Exit VarPut RC=1
Pgm name:
menu
Enter InitVar
Enter VarPut
RXSHV_SET = 1
TREXX_RC0
0
The trace follows a specific pattern. Firstly, the system variables are set up to make REXX equivalents for all the DT/2 variables available to the T-REXX program. Then, a connection is attempted to each server requested in the control (.CTL) file and its associated return code is logged. Finally, the main loop is entered where each T-REXX command is processed, the relevant action is called and its return code is logged.

Statistics Server Trace

Component: Statistics server

Version: 2.0 and above.

Trace on:

- SET TSSTATS_DEBUG=YES - standard tracing
- SET TSSTATS_DEBUG=MSG - message tracing

Trace off: SET TSSTATS_DEBUG=<NULL>

Where: Insert into the file RUNGSI.CMD before the TMSX command.

Description: Provides tracing for the statistics server.

Output: Screen.

Impact: Low.
**Results:** Consists of the sequence flow within the statistics server and varies depending on the type of tracing selected.

**Pre-req:** None.

**Extra:** Useful for checking any unusual statistics server behaviour. The following example output shows the trace sent to the screen with the trace set to 'YES':

```
SS msg type 0, len 0 from 0 inst 0
  Type 5, action 1, data 0, NIF 7
Preparing msg, count=1
SS msg type 0, len 0 from 0 inst 0
  Type 1, action 2, data 0, NIF 7
Preparing msg, count=2
SS msg type 0, len 0 from 0 inst 0
  Type 3, action 0, data 0, NIF 7
Preparing msg, count=3
...
SS msg type 0, len 0 from 0 inst 0
  Type 1, action 2, data 0, NIF 7
Preparing msg, count=10
SS msg type 0, len 0 from 0 inst 0
  Type 2, action 0, data 0, NIF 7
Preparing msg, count=11
SS msg type 0, len 0 from 0 inst 0
  Type 2, action 2, data 0, NIF 7
Preparing msg, count=12
```

The following example output shows the trace sent to the screen with the trace set to 'MSG':

```
SS msg type 15000, len 10 from 1 inst 0
  Type 5, action 1, data 0, NIF 0
SS msg type 15000, len 10 from 1 inst 1
  Type 5, action 1, data 0, NIF 1
SS msg type 15000, len 10 from 5 inst 0
  Type 1, action 2, data 0, NIF 0
SS msg type 15000, len 10 from 5 inst 0
  Type 3, action 9, data 0, NIF 0
SS msg type 15000, len 10 from 5 inst 0
  Type 1, action 1, data 0, NIF 0
```

---

**Log File Handler Trace**

**Component:** Log file handler

**Version:** 2.0 and above.

**Trace on:**

- SET WRAP_TRACE=YES - normal trace
- SET WRAP TRACE=MSG - message trace

**Trace off:** SET WRAP_TRACE=<NULL>

**Where:** Insert into the file RUNGSI.CMD before the TMSX command.

**Description:** Provides tracing for the wrap log file handler.

**Output:** File WRAPxxxx.OUT where xxxx is the process ID.

**Impact:** Low.

**Results:** Consists of internal data from the log file handler.

**Pre-req:** None.
**Extra:** Useful for determining any unusual log file behaviour. The following is an example output from the trace:

```
ENTER OpnWrapSess( ,128000,GSSSN01.LOG) PID=102
  Got open_sem
  split msg RBA=115399
  Clear open_sem
EXIT wrap_hdl=1 file_hdl=6
ENTER OpnWrapSess( ,25600,GSSSN01.NST) PID=102
  Got open_sem
  split msg RBA=22411
  Clear open_sem
EXIT wrap_hdl=2 file_hdl=8
ENTER OpnWrapSess( ,128000,GSSSN01.STS) PID=102
  Got open_sem
  split msg RBA=109933
  Clear open_sem
EXIT wrap_hdl=3 file_hdl=9
ENTER OpnWrapSess( ,128000,GSSSN01.AUD) PID=102
  Got open_sem
  split msg RBA=32838
  Clear open_sem
EXIT wrap_hdl=4 file_hdl=11
ENTER PutWrapSess(1) PID=102
  Request file_hdl=7BEF:/zerodot232
  Got file_hdl
  Write msg lng=74
  Write split msg at RBA=115475
  cleared 56 bytes old msg(s)
  seek to 128000 and write new RBA=115475
  Clear file_hdl
EXIT RC=0
```

The first section on the trace shows the log file handler connecting to each log file. It also shows the size of each log file when starting. After the startup, there is one 'PutWrapSess' entry for each message that needs to be logged.

---

**Message Handler Trace**

**Component:** Message handler

**Version:** 2.0 and above.

**Trace on:** SET TMSMSG_DEBUG=YES

**Trace off:** SET TMSMSG_DEBUG=<NULL>

**Where:** Where required depending on the part of DT/2 being started.

**Description:** Provides information from the central message file handler.

**Output:** Screen.

**Impact:** Low.

**Results:** Consists of the sequence flow within the message handler.

**Pre-req:** None.

**Extra:** Useful for determining any unusual messages of message corruption. Output can be piped to a file for inspection later.
Application Startup Trace

Component: Executor
Version: 2.0 and above.
Trace on: TRACE=YES
Trace off: Remove definition from file
Where: Insert into the file VSEXEC.CFG as required.
Description: Starts the application trace automatically when the executor is started.
Output: File <session_name>.OUT
Impact: Low.
Results: Consists of the sequence flow within the application.
Pre-req: None.
Extra: This starts the same trace as if you had pressed F9 on the application session in the node manager. However, the trace starts much earlier than it can be started manually and is therefore useful for determining problems during application startup.

Session Monitor Trace

Component: Session monitor
Version: 2.0.1 ServicePak UR44064 and above.
Trace on:
   SET SESSMON_TRACE=YES - full trace
   SET SESSMON_TRACE= <std_switches> - selective trace
Trace off: SET SESSMON_TRACE=<NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Traces the operation the session monitor.
Output: File SMNxxx.OUT where xxx is the process ID of the tracing application.
Impact: Low to medium.
Results: Consists of the sequence flow within the session monitor.
Pre-req: None.
Extra: This trace shows events that are happening within the session monitor. This is useful when investigating problems to do with application startup and shutdown.
Voice Program Trace

Component: Executor
Version: 2.0.1 ServicePak UR44064 and above.
Trace on:
   SET VPEXEC_TRACE=YES - full trace
   SET VPEXEC_TRACE= <std_switches> - selective trace
Trace off: SET VPEXEC_TRACE=<NULL>
Where: Insert into the file RUNGSI.CMD before the TMSX command.
Description: Provides tracing for the voice program executor.
Output: File VPXnnn.OUT where nnn is the process ID.
Impact: Medium.
Results: Consists of event flow within the voice program executor.
Pre-req: None.
Extra: Useful for tracing any errors that result from running a voice program.

ADSI Parameter Editor User Interface Trace

Component: ADSI
Version: Version: 2.1 and above.
Trace on: SET ADSI_UI_TRACE=YES
Trace off: SET ADSI_UI_TRACE=NO
Where: On the OS/2 command line where the ADSI User Interface is to be run. Then enter VAD and press Enter to initiate the VAD. Start the ADSI user interface as normal.
Description: Provides tracing of the ADSI parameter editor user interface.
Output: File ADSIUI.OUT
Impact: Medium.
Results: Details of the user interactions with the ADSI User Interface.
Pre-req: None.

ADSI Parameter Editor Database Trace

Component: ADSI
Version: Version: 2.1 and above.
Trace on: SET ADSI_DB_TRACE=YES
Trace off: SET ADSI_DB_TRACE=NO
Where: On the OS/2 command line where the ADSI User Interface is to be run. Then enter VAD and press Enter to initiate the VAD. Start the ADSI user interface as normal.
Description: Provides tracing of interactions between the ADSI user interface and the ADSI database.

Output: File ADSIDB.OUT

Impact: Medium.

Results: Details of interactions between the ADSI user interface and the ADSI database.

Pre-req: None.
Glossary of Terms and Abbreviations

This glossary defines all important terms and abbreviations used in this book that might be new or unfamiliar to you. If you do not find the term you are looking for, refer to the index or to the IBM Dictionary of Computing, New York: McGraw-Hill, 1994.

This glossary includes terms and abbreviations from:


- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC1/SC1). Definitions of published parts of this vocabulary are identified by the symbol (I) after the definition. Definitions taken from draft international standards, committee drafts, and working papers being developed by ISO/IEC JTC1/SC1 are identified by the symbol (T) after the definition, indicating final agreement has not yet been reached among the participating National Bodies of SC1.

A

**action.** (1) A DirectTalk/2 function that performs an activity in a voice application. DirectTalk/2 provides a set of actions which can be extended by creating your own actions. (2) In SAA Common User Access, one of the defined tasks that an application performs.

**advanced program-to-program communications (APPC).** An implementation of the SNA protocol that allows interconnected systems to communicate and share the processing of programs.

**APPC.** advanced program-to-program communications.

**application control file.** A file containing all of the parameters required to run a voice application in production mode.

**Application Manager.** The program that runs a voice application in a production environment after it has been created through the Voice Application Developer.

**ARTIC.** See RTIC

ASCII. American National Standard Code for Information Interchange. The standard code, using a coded character set consisting of 7-bit coded characters (8 bits including parity check), that is used for information interchange between data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters.

B

**BIOS.** Basic Input Output System. Firmware in your machine to provide the lowest level interface between the operating system and the hardware. Also often used as a term to describe the configuration utility provided with most machines which allows you to view and alter the various BIOS settings (such as interrupt numbers, port addresses, memory addresses); such utilities are often accessed by pressing Alt-F1 or similar at a certain point in the power-on sequence.

C

**CICS.** Customer Information Control System.

**CPC.** Call Progress Characterization. A Dialogic program for checking out the performance and setup of their adapter cards. See *Dialogic Voice CPC Software Reference*, 05-0080-002 for full details.

**CSD.** Corrective Service Diskettes. A set of diskettes, issued by a software supplier such as IBM, providing an update to an already purchased and installed piece of software. The term is extended to cover any officially supported software update, whether supplied on diskettes or other media.

**Customer Information Control System (CICS).** An IBM-licensed program that enables transactions entered at remote terminals to be processed concurrently by user-written application programs. It includes facilities for building, using, and maintaining databases.

D

**DCAF.** Distributed Console Access Facility.

**Distributed Console Access Facility (DCAF).** An IBM-licensed program product that allows the user to have complete access to a remote system including control of the keyboard and display of the target system.

**DTMF.** Dual tone multifrequency.
**dual tone multifrequency (DTMF).** A generic term used to describe an acoustic signal from the key pad of a telephone to the serving switching equipment. Two combining analog tones are used to represent digits (0-9) and characters (#, *).

**E**

**E1.** A European trunk line providing typically 30 lines on one digital connection.

**E1 Interface.** The software provided as part of DirectTalk/2 which interfaces to an E1 adapter card. See E1 (also T1).

**G**

**General Server.** A DirectTalk/2 system server that manages all the communications between requesters and servers, including routing requests and controlling the paths over which the requests are sent.

**General Server Interface (GSI).** A DirectTalk/2 interface that provides the means of enabling communications between requesters and servers.

**I**

**Industry Standard Architecture (ISA).** Standard name for the IBM Personal Computer AT architecture.

**IRQ.** Interrupt Request. A number defined in the BIOS settings which a particular adapter card and its device driver will use to direct the interrupts from the card to the processor.

**ISA.** Industry Standard Architecture. One particular standard microprocessor bus, prevalent in low-range and home machines. Its simple nature means that adapter cards which fit it commonly have jumpers on them to set IRQs, Ports and Addresses and also the BIOS configuration must be set by hand.

**L**

**LAPS.** Lan Adapter and Protocol Support. A set of device drivers, and a program (laps.exe) for configuring them, which provides support for protocols such as TCP/IP, NetBIOS, IEEE 802.2, for a Token Ring Adapter card.

**logical unit (LU).** In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by system services control points (SSCPs).

**LU.** Logical unit.

**M**

**mailbox.** A DirectTalk/2 file that holds the telephone messages of a recipient.

**Mailbox Manager.** The DirectTalk/2 program used to create and maintain the directory of users who have mailboxes that can be accessed using the voice messaging feature. In previous versions of DirectTalk/2, this was called the Directory Manager.

**Micro Channel Architecture (MCA).** One particular standard microprocessor bus, prevalent in high-range machines. Its more complex nature means that adapter cards which fit it can automatically configure themselves, obviating the need for on-board jumpers and the BIOS configuration for IRQs, Ports and Addresses to be set by hand. It is a bus architecture consisting of 32-bit address and data buses, an arbitration bus, a set of interrupt and support signals, and support of automatic configuration and interrupt sharing. It uses synchronous and asynchronous procedures for data transfers between memory, I/O devices, and a controlling master. The controlling master can be the system master, the DMA controller, or a bus master. Optional features include streaming data transfers and address and data parity.

**N**

**NetBIOS.** Network Basic Input/Output System. An operating system interface between application programs and the Token Ring adapter card.

**Node Manager.** A DirectTalk/2 menu-driven program used to monitor the status of system resources, including applications and phone lines in a production environment, and to issue commands to alter the status of resources, and to start and stop application sessions and phone lines.

**O**

**offhook.** The state of a telephone line when in use. When a telephone is answered on a public switched system, it is said to go offhook. Contrast with onhook.

**onhook.** The state of a telephone line when not in use. Contrast with offhook.
personal computer. An IBM Personal Computer, Personal System/2, or other personal computer system used with DirectTalk/2.

PTF. Program Temporary Fix. A software update, issued by a software supplier such as IBM, to provide an emergency fix for a problem with that software. (See also CSD).

physical unit (PU). In SNA, the component that manages and monitors the resources of a node, such as attached links and adjacent link stations, as requested by an SSCP via an SSCP-SSCP session.

PU. Physical unit.

RTIC. Real-Time Interface Co-Processor. A card that serves as an input/output adapter for communications to either an S/370 or S/390 host system. For DirectTalk/2, this generally refers to either a Portmaster or Multiport, Model 2 card.

SDLC. Synchronous Data Link Control.

SNA. Systems Network Architecture.

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

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks.

T1. A USA trunk line providing typically 24 lines on one digital connection.

T1 Interface. The software provided as part of DirectTalk/2 which interfaces to a T1 adapter card. See T1 (also E1).


TDD. Telephony Devices for the Deaf.

Telephony Server. A DirectTalk/2 system server that supplies telephony processing services. This processing includes playing and recording voice, tone generation, voice recognition, and text-to-speech.

TTS. Text To Speech. An adapter card and device drivers for it which produce synthesized speech from input text.

VCS. Voice Control Systems. A company which provides the voice recognition software used on the Dialogic adapter cards.

Virtual Telecommunications Access Method (VTAM). A set of programs that control communications between nodes and application programs running on a host (System/370) system.

Voice Application. An application that receives or places calls, plays recorded voice segments, and responds to the person's input. An application is made up of one or more voice programs.

Voice Application Developer (VAD). The DirectTalk/2 component that provides the environment for implementing voice-processing applications. An application developer is guided through menu-driven screens with online help to record and edit the greetings and menus that will be played to the caller, define the logic for the interaction with the caller, and debug the application.

voice logic module. A combination of voice logic statements of two types, IF and PLAY.

voice program. A DirectTalk/2 program that contains the steps, actions, voice logic modules, and voice segments that perform some or all of the functions of a voice application.

voice segment. The words and phrases you record to play to a caller using the voice application. A voice segment can consist of the phrases you record and the system voice variables.

VP. Voice Processing telephony sub-system (part of DirectTalk/2).
VR. Voice Recognition. A system of hardware and software which allows words or phrases spoken by a caller to be recognised and distinguished.

VRU. Voice Recognition Unit

VTAM. Virtual Telecommunications Access Method.
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