

Oracle[®] Network Products Messages Manual

Release 2.2

Part No. A32089-1

ORACLE[®]

Oracle Network Products Messages Manual, Release 2.2

Part No. A32089-1

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Preface

This manual provides information required to understand and use the problem resolution facilities of the following Oracle network products:

- SQL*Net version 2.0 and later
- MultiProtocol Interchange
- Oracle Protocol Adapters
- Oracle Network Manager
- Oracle Names
- Secure Network Systems
- Oracle Native Naming Adapters

In particular, this guide






- provides an overview of messages, error logs, and trace facilities
- describes how to use the error logs and trace facilities
- describes how to configure the client, server, Interchange, listener, and Names server components to invoke the trace facility
- lists all the Oracle network product error messages and their probable causes and provides the actions recommended to correct them

Audience

The information in this manual is intended primarily for network administrators, but may be useful for all users of Oracle network products.

Documentation Set

The Oracle network products documentation set consists of manuals that help you to set up an integrated, heterogeneous network and to use the applications and services provided. The documentation consists of the following manuals:

-  • The *Oracle Network Products Messages Manual* (this manual) describes aspects of errors and diagnosing them, including:
 - information about coping with errors and using the diagnostic features of Oracle network products
 - the error messages and informational messages that may occur during use of SQL*Net, the Interchange, and Oracle Protocol Adapters
 - the error messages and informational messages that may occur during use of the Oracle Network Manager and Oracle Names.
-  • *Understanding SQL*Net* provides an overview of SQL*Net V2 and specific information about
 - architecture of SQL*Net V2.1
 - planning and configuring SQL*Net V2.1
 - using SQL*Net V2.1
-  • *Oracle Network Manager Administrator's Guide* describes how to use the Oracle Network Manager to create and manage the configuration files needed for your network.
-  • *Oracle MultiProtocol Interchange Administrator's Guide* describes the MultiProtocol Interchange, including:
 - purpose and function of the Interchange
 - architecture of the Interchange
 - considerations for designing an Oracle application network
 - configuring and using the Interchange in an Oracle application network
-  • *Oracle Names Administrator's Guide* describes how to use this product to provide structured administration for a distributed database network.



SNS

- *Secure Network Services Administrator's Guide* describes the new encryption, checksum, and authentication features available to add security to network messages, including
 - the purpose of the new security features
 - the effectiveness of the security features
 - how to enable the security features using Oracle Network Manager

Note: Secure Network Services release 1.1 includes encryption and checksum ability. Secure Network Services version 2.0 also includes authentication services.



SNMP

- *Oracle SNMP Support Reference Guide* describes how to use Oracle SNMP Support, which works with third-party vendor software to monitor services in a SQL*Net network. Includes MIBS for the following network objects:
 - Oracle MultiProtocol Interchange
 - Network listener
 - Oracle Names server
 - Oracle7 Server

Oracle Protocol Adapters Information



OS Doc

- Oracle Protocol Adapter information for each operating system

Information about protocol adapters is found in various operating system specific documents. Refer first to the Oracle installation documentation for your platform in order to determine where to find information, including:

- an overview of the Oracle Protocol Adapters
- protocol terms and concepts
- protocol-specific keywords used in the connect descriptors

Throughout this book you will see these small book icons to alert you to other documentation.

In addition, you may wish to refer to documentation for other Oracle products, such as the *Oracle7 Server Messages and Codes Manual*.

How this Manual Is Organized

The *Oracle Network Products Messages Manual* is organized into seven chapters and one appendix.

Chapter 1—Interpreting Error Messages

This chapter gives you general information and helpful tips about error messages. The topics it covers include:

- locating different types of Oracle networking error messages
- understanding error message stacks
- using error number ranges
- calling Oracle Customer Support

Chapter 2—Error Logging and Trace Facilities

This chapter describes the trace options that may be used to examine Oracle network applications. It explains how to invoke the trace facility and use the trace information to diagnose and resolve operating problems.

Chapter 3—Networking Error Messages

This chapter lists error messages you may see when using SQL*Net and the Oracle MultiProtocol Interchange. For each error, the probable cause and corrective action are given.

Chapter 4—Network Manager Error Messages

This chapter lists the messages you may see when using Oracle Network Manager. For each error, the probable cause and corrective action are given.

Chapter 5—Oracle Names Error Messages

This chapter lists the messages you may see when using Oracle Names. For each error, the probable cause and corrective action are given.

Chapter 6—Oracle SNMP Support Messages

This chapter lists the messages you may see when using Oracle SNMP Support. For each error, the probable cause and corrective action are given.

Chapter 7—Oracle Native Naming Adapters Messages

This chapter lists the messages you may see when using Oracle Native Naming Adapters. For each error, the probable cause and corrective action are given.

Appendix A—Trace and Log Parameter Reference

This appendix provides a detailed reference for the log and trace facilities parameters and how they are used.

Note: This manual contains examples and figures that refer to specific machine types, network protocols, and operating systems. These references are examples of one type of configuration and are not representative of all configurations. For operating system-specific issues, such as installation, configuration file locations, and protocol support, see your Oracle operating system-specific manual.

Suggestions for Using this Manual

For a general overview of the terms and concepts associated with error messages, read Chapter 1, "Interpreting Error Messages."

To understand how trace facilities are used in Oracle network products, read Chapter 2, "Error Logging and Trace Facilities."

To understand a specific error message and learn the recommended course of action, refer to Chapter 3, "Networking Error Messages," Chapter 4, "Network Manager Error Messages," Chapter 5, "Oracle Names Error Messages," Chapter 6, "Oracle SNMP Support Messages," or Chapter 7, "Oracle Native Naming Adapter Messages".

For detailed information on using the parameters of the log and trace facilities, read Appendix A, "Trace and Log Parameter Reference."

Notational Conventions

The following syntax conventions are used in this manual:

Monospace normal	Monospace shows computer display or contains text you need to enter exactly as shown.
<i>Monospace italics</i>	Monospace in italics represents a command variable. Substitute an appropriate value.
[]	Brackets enclose optional items. Do not enter the brackets.
()	Parentheses enclose all Keyword-Value pairs. Parentheses themselves are part of the syntax and must be entered; for example, (KEYWORD=value).
	A vertical bar represents a choice of two or more options. You must enter one of the options. Do not enter the vertical bar.
Punctuation	Punctuation other than brackets and vertical bars must be entered as shown.

UPPERCASE Uppercase characters within the text represent command names, filenames, and directory names, and parameter names.

Note: Some operating systems are case-sensitive. Although our convention is to present command names, filenames, and directory names in uppercase, that does not necessarily mean that they should be in uppercase on your platforms.

Your Comments Are Welcome

We value and appreciate your comments as an Oracle products user. As we write, revise, and evaluate our work, your opinions are the most important input we receive. At the back of this manual is a Reader's Comment Form; we encourage you to use this form to tell us what you like and dislike about this (or other) Oracle manuals. If the form is gone, or you would like to contact us, please use the following address:

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Interpreting Error Messages

This chapter provides general information and helpful tips about error messages. It covers the following topics:

- locating different types of Oracle network error messages
- understanding error message stacks
- calling Oracle Customer Support

Sorting Out Networking Error Messages

Error messages may originate from many sources, especially in distributed applications in which many components interact. Applications such as SQL*Plus, SQL*Forms, or Pro*C applications, which depend on network services from network applications such as SQL*Net, display a single message for errors encountered. This concise error message is often not sufficient to identify the specific cause of a network error. A network error may originate at any of several different layers within the TNS products, but the user application reports only the highest level error. The actual cause of the error can be found in the error stack produced by all the layers of TNS products such as SQL*Net and Oracle Protocol Adapters.

Error Stacks

The relationships among Oracle network products as they might appear in an error stack is shown in Figure 1 – 1:

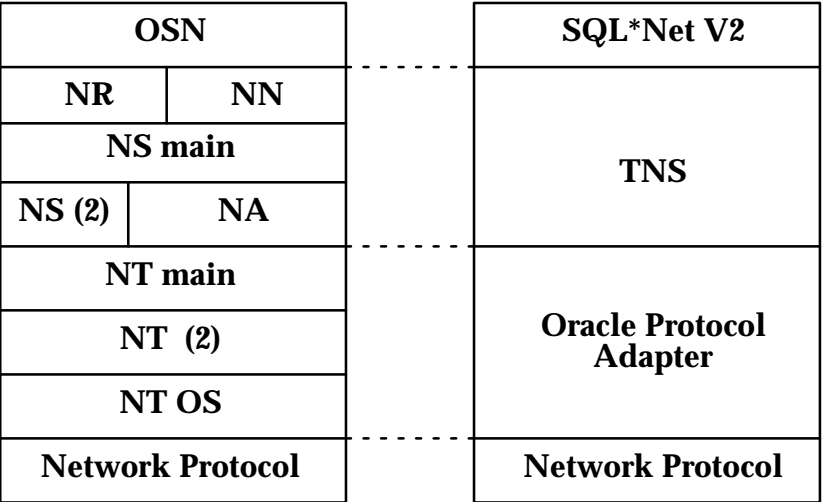


Figure 1 – 1 Network Products and Error Stack Components

The layers shown in this figure, which you will see in the error stacks, have the following meanings:

- OSN SQL*Net Interface Layer
- NR Network Routing (MultiProtocol Interchange)
- NN Network Naming (Oracle Names)
- NS Network Session (main and secondary layers)
- NA Native Services includes Network Authentication (NAU) and Network Encryption (NAE)

NT Network Transport (main, secondary, and
 operating system layers)

Note: Your network may not include all of these components.

When a network error occurs, each layer contributes to the error stack. Some layers report no error and others report what they know about the error. For example, suppose that a user of a client application tries to establish a connection with a database server using SQL*Net version 2 and TCP/IP, and the user enters:

```
sqlplus scott/tiger@hrserver.world
```

After the banner of SQL*Plus appears on the screen, the following error is displayed:

```
ORA-12203: Unable to open message file (SQL-02213)
```

This message indicates that the error message file on the Oracle server could not be opened, because the connection to the server failed. However, although the application displays only a one line error message, an error stack that is much more informative is recorded in the log file by the network layer, if it is able to locate the appropriate message files on the client machine. This error stack can also be captured in trace files by invoking the trace facility and trying the connection again. In the client side log output file, SQLNET.LOG, an error stack corresponding to the SQL*Plus ORA-12203 error contains the following message:

```
*****
Fatal OSN connect error 12203, connecting to:
(DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)
(HOST=lala)(USER=sviavant)))(ADDRESS_LIST=(ADDRESS=
(PROTOCOL=ipc)(KEY=trace))(ADDRESS=(PROTOCOL=tcp)
(HOST=lala)(PORT=1521))))

VERSION INFORMATION:
TNS for SunOS: Version 2.1.3.0.0 -
Oracle Bequeath NT Protocol Adapter for SunOS: Version
2.1.3.0.0
Unix Domain Socket IPC NT Protocol Adaptor for SunOS:
Version 2.1.3.0.0 -
TCP/IP NT Protocol Adapter for SunOS: Version 2.1.3.0.0
Time: 07-FEB-94 17:36:38
Tracing to file: /home/sviavant/trace_admin.trc
Tns error struct:
nr err code: 12203
TNS-12203: TNS:unable to connect to destination
```

```

ns main err code: 12541
TNS-12541: TNS:no listener
ns secondary err code: 12560
nt main err code: 511
TNS-00511: No listener
nt secondary err code: 61
nt OS err code: 0

```

Each of the six middle layers shown in Figure 1–1 contributes an error status to the error stack. In this example, the actual cause of the error is introduced and reported at the "nt main" layer. When the error number 511 is propagated to the upper layers, the same error is interpreted by the "ns (2)," "ns main," and "nr" layers to be errors 12560, 12541, and 12203 respectively. These error messages are all listed in Chapter 3 of this manual, along with a cause and suggested corrective action for each.

Oracle Networking Error Prefixes

Oracle network product error messages are identified by ten prefixes.

- The prefix "TNS" means that the error message is generated by an Oracle network product. For example, an application may display the following error:

```
TNS-00103: Parameter file initialization error.
```

The error is documented in Chapter 3 of this manual, and the information in Chapter 3 explains the error and offers a recommended action.

- The prefix "ORA" is the generic prefix returned by all Oracle applications, but within that category network product specific errors can be identified by the "TNS:" prefix at the beginning of the error string. Some network product error messages may appear with either the "ORA-" or the "TNS-" prefix, depending on the source of the error message. In these cases, the message text is the same regardless of whether the message is looked up in the ORA or the TNS message files.

In addition, Secure Network Services messages have the "ORA-" prefix.

Error messages for the Oracle Protocol Adapters, TNS, SQL*Net, the Oracle MultiProtocol Interchange, and Secure Network Services are documented in Chapter 3, regardless of their prefix.

For example, although the following error has the "ORA-" prefix used by all Oracle products, the "TNS:" characters in the

beginning of the message text identify it as an Oracle network product error message. The error is documented in Chapter 3 of this manual, and the information in Chapter 3 explains the error and offers a recommended action.

```
ORA-12203: TNS: Unable to connect to destination
```

- The prefix "NMC" indicates that an error message is generated by the Oracle Network Manager. The prefix "NMO" indicates error messages generated by the network object layer of the Network Manager. The prefix "NMR" is for messages generated from the ROS file level of the Network Manager. For example, the Network Manager may display the following error:

```
NMC-00010: Resource file cannot be opened
```

The error is documented in Chapter 4 of this manual, and the information in Chapter 4 explains the error and offers a recommended action.

- The prefix "NNO" precedes error messages generated by a Names server. The prefix "NNC" is for error messages generated by an Oracle Names client, and those common to both server and client. The prefix "NNL" is for error messages generated by the Oracle Names Control utility.

The "NMP" prefix is for error messages generated by the Network Management Protocol, the part of the Names server that handles SNMP queries. The "NPL" prefix precedes error messages generated by the Network Presentation Layer component of the Names server. (Network Management Protocol and Network Presentation Layer error messages are typically not visible to the user.)

For example, a Names server may display the following error:

```
NNO-00052: invalid domain description list
```

The error is documented in Chapter 5 of this manual, and the information in Chapter 5 explains the error and offers a recommended action.

Error Ranges

Oracle network product error messages are listed in Chapter 3 through Chapter 7. All error messages are identified by error message numbers. The error messages are organized in ascending numerical order and are separated into sections based on the error message prefix. Within each section, the error messages are organized into subsections based on the component that reported the error. The prefixes, message

numbers, and the product components where they are generated are shown in Table 1-1:

Table 1 – 1
Error Message Prefix, Numbers,
and Components

<i>Prefix</i>	<i>Error Number</i>		<i>Component</i>	<i>Type of Error</i>
TNS	1	to 500	NR (routing)	MultiProtocol Interchange
TNS	501	to 1000	NT (transport)	Protocol Adapter
TNS	1001	to 2500	Listener Control Program	Listener Control Program
TNS	2501	to 3500	NA Internal Messages	NAU (Authentication) and NAE (Encryption)
ORA/TNS	12150	to 12195	SQL*Net	Oracle SQL*Net
ORA/TNS	12196	to 12285	NR (routing)	TNS
ORA/TNS	12500	to 12530	Listener	Listener to client
ORA/TNS	12531	to 12629	NS (session)	TNS
ORA/TNS	12630	to 12699	NA (Native Services)	Native Services (Authentication and Encryption)
NMC	00001	to 11000	Network Manager	Oracle Network Manager
NMO	01001	to 01300	Object Layer	Oracle Network Manager Object Store
NMR	00001	to 00500	Resource Layer	Oracle Network Manager
NNO	00050	to 00711	NN (Network Naming)	Oracle Names server
NNC	00001	to 00501	NN (Network Naming)	Oracle Names client and server
NNL	00001	to 01073	NN (Network Naming)	Oracle Names Control Utility
NMP	00001	to 00011	NMP (Network Management Protocol)	Oracle Names client and server
NPL	00100	to 00420	NPL (Network Presentation Layer)	Network Presentation Layer

<i>Prefix</i>	<i>Error Number</i>	<i>Component</i>	<i>Type of Error</i>
NMS	00001 to 00275	NMS (Oracle SNMP Sup- port)	Oracle SNMP Support
NNF	00001 to 04999	NNF (Native Naming Adapters)	Native Naming Adapters

Error Messages and
Documentation

Table 1 – 2
Error Messages and Related
Documentation

Error messages you may encounter while using Oracle network products fall into the categories shown in Table 1–2:

<i>Type of Error Message</i>	<i>Where to Find Information</i>
Application	Application reference manual
Operating system	Operating system documentation
Network protocol	Protocol-specific documentation
Oracle network software SQL*Net Version 2.x MultiProtocol Interchange TNS Secure Network Services Oracle Protocol Adapters Network Manager Oracle Names SNMP Support Native Naming	<i>This manual</i>

Calling Worldwide Customer Support

Some error messages recommend calling Worldwide Customer Support to report the error. When you call Worldwide Customer Support, please have the following information at hand:

- The hardware, operating system, and release number of the operating system on which your application(s) are running.

Example: "My client application runs on a Sun workstation running SUN OS4.1.3 and the server application runs on a VAX machine running VMS Version 5.4. The protocol is TCP/IP."

- The release numbers of all the Oracle networking products involved in the current problem.

Example: "We are running SQL*Net release 2.0.14 at the client and the server, with release 2.0.14 Oracle TCP/IP Adapters."

- If you encountered one or more error codes or messages, the exact code numbers and message texts in the order they appeared.
- The problem severity according to the following codes:
 - 1 = Program not usable. Critical impact on operations.
 - 2 = Program usable. Operations severely restricted.
 - 3 = Program usable with limited functions. Not critical to overall operations.
 - 4 = Problem circumvented by customer. Minimal effect, if any, on operations.
- A description of the problem, including any unusual conditions.
- You will also be expected to provide your:
 - name
 - company's name
 - company's Oracle customer support ID (CSI) number
 - phone number

Log and Trace Facilities

This chapter describes the log and trace facilities that can be used to examine application connections that use SQL*Net. It explains how to invoke the trace facility and how to use the log and trace information to diagnose and resolve operating problems. In particular, this chapter describes:

- what the log facility is
- what the trace facility is
- how to invoke the trace facility
- logging and tracing parameters
- sample log output
- sample trace output
- examples of tracing



OS Doc

Note: Information in this section is generic to all operating system environments. You may require further information from the Oracle operating system-specific documentation for some details of your specific operating environment.

What is the Log Facility?

All errors encountered in SQL*Net are logged to a log file for evaluation by a network or database administrator. The log file provides additional information for an administrator when the error on the screen is inadequate to understand the failure. The log file, by way of the error stack, shows the state of the TNS software at various layers. The properties of the log file are:

- Error information is appended to the log file when an error occurs.
- Generally, a log file can only be replaced or erased by an administrator, although client log files can be deleted by the user whose application created them. (Note that in general it is bad practice to delete these files while the program using them is still actively logging.)
- Logging of errors for the client, server, and listener cannot be disabled. This is an essential feature that ensures all errors are recorded.
- The Navigator and Connection Manager components of the MultiProtocol Interchange may have logging turned on or off. If on, logging includes connection statistics. The Navigator may optionally log additional information for process or audit control of operations. You set logging parameters using the Oracle Network Manager.
- The Names server may have logging turned on or off. If on, a Names server's operational events are written to a specified logfile. You set logging parameters using the Oracle Network Manager.

What is the Trace Facility?

The trace facility allows a network or database administrator to obtain more information on the internal operations of the components of a TNS network than is provided in a log file. Tracing an operation produces a detailed sequence of statements that describe the events as they are executed. All trace output is directed to trace output files which can be evaluated after the failure to identify the events that lead up to an error. The trace facility is typically invoked during the occurrence of an abnormal condition, when the log file does not provide a clear indication of the cause.



Attention: The trace facility uses a large amount of disk space and may have a significant impact upon system performance. Therefore, you are cautioned to turn the trace facility on only as part of a diagnostic procedure and to turn it off promptly when it is no longer necessary.

Components that can be traced using the trace facility are:

- Network listener
- SQL*Net version 2 components
 - SQL*Net client
 - SQL*Net server
- MultiProtocol Interchange components
 - the Connection Manager and pumps
 - the Navigator
- Oracle Names
 - Names server
 - Names Control Utility

The trace facility can be used to identify the following types of problems:

- difficulties in establishing connections
- abnormal termination of established connections
- fatal errors occurring during the operation of TNS network components

You set non-default tracing parameters in the network definition using the Oracle Network Manager. Client tracing is governed by the parameters in the SQLNET.ORA file. Server tracing is also governed by parameters in the SQLNET.ORA file, but you must include them manually. You typically turn on tracing for other network components using the appropriate control utility. For example, using the Network Manager you can set the listener trace level, and non-default name and location for the trace file in the LISTENER.ORA file. To turn tracing on and off, use the TRACE command of the Listener Control Utility. See *Understanding SQL*Net* for the correct syntax.

What is the Difference between Logging and Tracing?

While logging provides the state of the TNS components at the time of an error, tracing provides a description of all software events as they occur, and therefore provides additional information about events prior to an error. There are three levels of diagnostics, each providing more information than the previous level. The three levels are:

1. The reported error from Oracle7 or tools; this is the single error that is commonly returned to the user.
2. The log file containing the state of TNS at the time of the error. This can often uncover low level errors in interaction with the underlying protocols.
3. The trace file containing English statements describing what the TNS software has done from the time the trace session was initiated until the failure is recreated.

When an error occurs, a simple error message is displayed and a log file is generated. Optionally, a trace file can be generated for more information. (Remember, however, that using the trace facility has an impact on your system performance.)

In the following example, the user failed to use Oracle Network Manager to create a configuration file, and misspelled the word "PORT" as "POT" in the connect descriptor. It is not important that you understand in detail the contents of each of these results; this example is intended only to provide a comparison.

Reported Error

On the screen in SQL*Forms:

```
ERROR: ORA-12533: Unable to open message file (SQL-02113)
```

Logged Error

In the log file, SQLNET.LOG:

```
*****
Fatal OSN connect error 12533, connecting to:
  (DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala)
    (USER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=ipc)
    (KEY=bad_port))(ADDRESS=(PROTOCOL=tcp)(HOST=lala)(POT=1521))))

VERSION INFORMATION:
  TNS for SunOS: Version 2.0.14.0.0 - Developer's Release
  Oracle Bequeath NT Protocol Adapter for SunOS: Version
  2.0.14.0.0 - Developer's Release
  Unix Domain Socket IPC NT Protocol Adaptor for SunOS: Version
  2.0.14.0.0 - Developer's Release
  TCP/IP NT Protocol Adapter for SunOS: Version 2.0.14.0.0 -
  Developer's Release
```



```

Time: 07-MAY-93 17:38:50
Tracing to file: /home/ginger/trace_admin.trc
Tns error struct:
  nr err code: 12206
  TNS-12206: TNS:received a TNS error while doing navigation
  ns main err code: 12533
  TNS-12533: TNS:illegal ADDRESS parameters
  ns secondary err code: 12560
  nt main err code: 503
  TNS-00503: Illegal ADDRESS parameters
  nt secondary err code: 0
  nt OS err code: 0

```

Example of Trace of Error **The trace file, SQLNET.TRC at the USER level, contains the following information:**

```

--- TRACE CONFIGURATION INFORMATION FOLLOWS ---
New trace stream is "/privatel/oracle/trace_user.trc"
New trace level is 4
--- TRACE CONFIGURATION INFORMATION ENDS ---

--- PARAMETER SOURCE INFORMATION FOLLOWS ---
Attempted load of system pfile source
/privatel/oracle/network/admin/sqlnet.ora
Parameter source was not loaded
Error stack follows:
NL-00405: cannot open parameter file

Attempted load of local pfile source /home/ginger/.sqlnet.ora
Parameter source loaded successfully

-> PARAMETER TABLE LOAD RESULTS FOLLOW <-
Some parameters may not have been loaded
See dump for parameters which loaded OK
-> PARAMETER TABLE HAS THE FOLLOWING CONTENTS <-
  TRACE_DIRECTORY_CLIENT = /privatel/oracle
  trace_level_client = USER
  TRACE_FILE_CLIENT = trace_user
--- PARAMETER SOURCE INFORMATION ENDS ---

--- LOG CONFIGURATION INFORMATION FOLLOWS ---
Attempted open of log stream "/tmp_mnt/home/ginger/sqlnet.log"
Successful stream open
--- LOG CONFIGURATION INFORMATION ENDS ---

Unable to get data from navigation file tnsnav.ora
local names file is /home/ginger/.tnsnames.ora
system names file is /etc/tnsnames.ora
-<ERROR>- failure, error stack follows

```

```

-<ERROR>- NL-00427: bad list
-<ERROR>- NOTE: FILE CONTAINS ERRORS, SOME NAMES MAY BE MISSING

Calling address:
(DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala)(U
SER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=ipc)(KEY=bad_port))(
ADDRESS=(PROTOCOL=tcp)(HOST=lala)(POT=1521))))
Getting local community information
Looking for local addresses setup by nrigla
No addresses in the preferred address list
TNSNAV.ORA is not present. No local communities entry.
Getting local address information
Address list being processed...
No community information so all addresses are "local"
Resolving address to use to call destination or next hop
Processing address list...
No community entries so iterate over address list
This a local community access
Got routable address information
Making call with following address information:
(DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=ipc)(KEY=bad_port)))
Calling with outgoing connect data
(DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala)(U
SER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=tcp)(HOST=lala)(POT=
1521))))
(DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=ipc)(KEY=bad_port)))
KEY = bad_port
connecting...
opening transport...
-<ERROR>- sd=8, op=1, resnt[0]=511, resnt[1]=2, resnt[2]=0
-<ERROR>- unable to open transport
-<ERROR>- nsres: id=0, op=1, ns=12541, ns2=12560; nt[0]=511,
nt[1]=2, nt[2]=0
connect attempt failed
Call failed...
Call made to destination
Processing address list so continuing
Getting local community information
Looking for local addresses setup by nrigla
No addresses in the preferred address list
TNSNAV.ORA is not present. No local communities entry.
Getting local address information
Address list being processed...
No community information so all addresses are "local"
Resolving address to use to call destination or next hop
Processing address list...
No community entries so iterate over address list
This a local community access
Got routable address information

```

```

Making call with following address information:
(DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=tcp)(HOST=lala)(POT=1521)
))
Calling with outgoing connect data
(DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala)(U
SER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=tcp)(HOST=lala)(POT=
1521))))
(DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=tcp)(HOST=lala)(POT=1521)
))

-<FATAL?>- failed to recognize: POT

-<ERROR>- nsres: id=0, op=13, ns=12533, ns2=12560; nt[0]=503,
nt[1]=0, nt[2]=0
Call failed...
Exiting NRICALL with following termination result -1
-<ERROR>- error from nricall
-<ERROR>- nr err code: 12206
-<ERROR>- ns main err code: 12533
-<ERROR>- ns (2) err code: 12560
-<ERROR>- nt main err code: 503
-<ERROR>- nt (2) err code: 0
-<ERROR>- nt OS err code: 0
-<ERROR>- Couldn't connect, returning 12533

```

In the trace file, note that unexpected events are preceded with an `-<ERROR>-` stamp. These events may represent serious errors, minor errors, or merely unexpected results from an internal operation. More serious and probably fatal errors are stamped with the `-<FATAL?>-` prefix.

In this example trace file, you can see that the root problem, the misspelling of "PORT," is indicated by the trace line:

```
-<FATAL?>- failed to recognize: POT
```

Using the Log Facility

The log file automatically records connection errors for the client, server, and listener. Logging for the Connection Manager and pumps and the Navigator includes statistical information. You can request the Navigator to log more detailed information.

Setting the Log Parameters

Component Configuration Files

Table 2–1 shows the four configuration files that contain the log parameters for Oracle network product components.

Table 2 – 1
Log Parameters and Component Configuration Files

<i>Log Parameters Corresponding to</i>	<i>Configuration File</i>
client	SQLNET.ORA
server	
Names Control Utility	
listener	LISTENER.ORA
Interchange Connection Manager and pumps Navigator	INTCHG.ORA
Names server	NAMES.ORA

Although there are operating system specific default names and locations for the log files, you can specify alternative names and locations if you wish. You do so using Oracle Network Manager. Each component has one or more corresponding log parameters that determine the following:

- the log file name (optional)
- the log file directory (optional)

A summary of all log parameters is provided in Tables 2–3, 2–4, and 2–5.



See the Oracle operating system–specific documentation for your platform to determine where these files are expected to reside and where you can find sample files.

Note: The Connection Manager and Navigator log file location cannot be modified using Oracle Network Manager. Use the default location for your platform.

Format for Log Parameters

When you use Oracle Network Manager to create or edit the log parameters, you do not need to be concerned about syntax. Use Oracle

Network Manager to create or edit the log parameters for all components except the client and server.

Note: There is usually a single SQLNET.ORA file for all the clients and servers on a node. That file would contain log parameters for both clients and servers. Generally all clients on a node will have similar logging requirements, as will all servers.

The following format information is useful for when you need to edit log parameters for the server in the SQLNET.ORA file.

Log parameters are entered in the appropriate component configuration files in the form:

```
log_parameter_component = value
```

The *component* is one of listener name, client, server, Connection Manager, Navigator, or Names server.

Note: All log parameters except those for the listener are entered with their component's generic name (for example, navigator). However, the listener log parameters are entered with the name of the specific listener (for example, LISTENER2). However, the server is the only component for which you should configure log parameters manually. All other components are configured using Oracle Network Manager.

Summary of Available Log Parameters

Parameters are available to control the log file name and location for the client, the server, the listener, and the Names server. The Connection Manager and the Navigator have these parameters, and in addition both have a parameter that controls whether logging is done. You can turn on logging for both the Connection Manager and the Navigator through a single entry in the Interchange property sheet in Oracle Network Manager. The Navigator has a parameter to control logging of optional information for process and audit control. The Connection Manager has a parameter to control the frequency of logging its statistics. Logging for the pumps is included in the log files for the Connection Manager.

Log File Names

Log files produced by different components have unique names. The default file names are:

SQLNET.LOG	Contains client and/or server information
LISTENER.LOG	Contains listener information
INTCHG.LOG	Contains Connection Manager and pump information

NAVGA^{TR}.LOG Contains Navigator information

NAMES.LOG Contains Names server information

You can control the name of the log file. For each component, any valid string can be used to create a log file name. The parameters are of the form:

```
LOG_FILE_component = string
```

For example:

```
LOG_FILE_LISTENER = TEST
```

This parameter would send listener log output to a file called TEST.LOG on the server machine. On most operating systems, the *.log* suffix is automatically appended to the log file name. Therefore, do not include a suffix in the log file name string.



OS Doc

Some platforms have restrictions on the properties of a file name. See your Oracle operating system specific manuals for platform specific restrictions.

Log File Directories

You can control the destination location of the log file for each component. The parameters are of the form:

```
LOG_DIRECTORY_component = valid directory
```

Examples are specific to different operating systems. An example on UNIX might be:

```
LOG_DIRECTORY_LISTENER = /tmp/log
```



OS Doc

Some platforms have restrictions on the properties of a directory. See your Oracle operating system specific manuals for platform specific restrictions.

Logging for Interchange Components

You can set parameters that determine whether or not log files are produced by the Interchange components, the Connection Manager and pumps, and the Navigator. The Navigator has a parameter to control the amount of information collected into a log file. The Connection Manager has a parameter that controls the frequency of logging. These optional parameters are part of the INTCHG.ORA file.

Turning Logging On

By default, the Interchange components do not produce log files. If you want log files to be created, use the Logging page of the Interchange property sheet in Oracle Network Manager.

A single option, Level, determines whether logging is activated for the Connection Manager and the Navigator. The Choices and their consequences are as follows:

OFF	No logging for either the Connection Manager or the Navigator. This is the default.
ON	Logging is on for the Connection Manager (and pumps), but not the Navigator.
ERRORS	Logging is on for the Connection Manager (and pumps), and all errors of Navigation are logged for the Navigator.
ALL	Logging is on for the Connection Manager (and pumps), and all navigation requests are logged for the Navigator.

Setting Logging Intervals for the Connection Manager

The parameter LOG_INTERVAL_CMANAGER indicates the length of the interval between logs of statistics by the Connection Manager, if logging is turned on for that component. Set this parameter using the Logging page of the Interchange property sheet in Oracle Network Manager.

Logging for Pumps

There are no separate log files generated for pumps. All pump log properties are determined by the corresponding Connection Manager parameters.

Note: See the *Oracle Network Manager Administrator's Guide* for how to set logging parameters for all the network objects.

Using Log Files

Follow these steps to track an error using a log file:

1. Browse the log file for the most recent error that matches the error number you have received from the application. This is almost always the last entry in the log file. Notice that an entry or error stack in the log file is usually many lines in length. In the example earlier in this chapter, the error number was 12207.
2. Starting at the bottom, look up to the first non-zero entry in the error report. This is usually the actual cause. In the example earlier in this chapter, the last non-zero entry is the "ns" error 12560.
3. Look up the first non-zero entry in later chapters of this book for its recommended cause and action. (For example, you would find the "ns" error 12560 under ORA-12560.) To understand the notation used in the error report, see the previous chapter, "Interpreting Error Messages."

4. If that error does not provide the desired information, move up the error stack to the second to last error and so on.
5. If the cause of the error is still not clear, turn on tracing and re-execute the statement that produced the error message. The use of the trace facility is described in detail later in this chapter. Be sure to turn tracing off after you have re-executed the command.

Using the Trace Facility

The steps used to invoke tracing are outlined here. Each step is fully described in subsequent sections.

1. Choose the component to be traced from the list:
 - client
 - server
 - listener
 - Connection Manager and pump (cmanager)
 - Navigator (navigator)
 - Names server
 - Names Control Utility
2. If an existing trace file from a previous trace session exists for a listener or a client and you need to retain the information in it, save that file under another name. The new trace file will overwrite the existing trace file. (For Interchange components and the server, the trace facility appends a process identifier to each trace file, so each one is unique.

For the Names server, the trace facility appends a process identifier to each trace file only if NAMES.TRACE_UNIQUE is set to ON in the NAMES.ORA file. For the Names Control Utility, the trace facility appends a process identifier to each trace file only if NAMESCTL.TRACE_UNIQUE is set to TRUE in the SQLNET.ORA file.) To ensure unique trace files, you must set NAMES.TRACE_UNIQUE to ON in NAMES.ORA, then restart the Names server. You cannot set this from the Names Control Utility.

3. The trace facility for the listener is controlled through the Listener Control Utility. The trace facilities for the Connection Manager and pumps and for the Navigator are invoked through the Interchange Control Utility. For the listener, the LSNRCTL TRACE command



can be used to set the trace level while the component is running; for Interchange components, the INTCTL TRACE_ON command does the same thing. If you use this method, steps 4 and 5 can be skipped. See *Understanding SQL*Net* and the *MultiProtocol Interchange Administrator's Guide* for specific syntax.

The trace facility for the Names server and Names Control Utility itself is invoked either from NAMESCTL or by setting the parameter in the configuration file and restarting the Names server or NAMESCTL. For the Names server, only the NAMES.TRACE_LEVEL command can be used to set the trace level from NAMESCTL while the Names server is running. You must set the other trace commands in the configuration file, then restart either the Names server or NAMESCTL. See the *Oracle Names Administrator's Guide* for specific syntax.

4. For any component, you can invoke the trace facility by editing the component configuration file that corresponds to the component traced. The component configuration files are SQLNET.ORA, LISTENER.ORA, INTCHG.ORA, and NAMES.ORA. The trace parameters are described in the section "Setting the Trace Parameters" later in this chapter, and a summary of all trace parameters is provided in Tables 2-3 through 2-7.
5. Execute or start the component to be traced. If the trace component configuration files are modified while the component is running, the modified trace parameters will take effect the next time the component is invoked or restarted. Specifically for each component:

client	Set the trace parameters in the client-side SQLNET.ORA and invoke a client application, such as SQL*Plus, a Pro*C application, or any application that uses the Oracle network products. You can set or edit the trace parameters using the Client Profile property sheet in Oracle Network Manager.
--------	--

server	Set the trace parameters in the server-side SQLNET.ORA. The next process started by the listener will have tracing enabled. The trace parameters must be created or edited manually.
--------	--

listener	Use the Listener property sheet in Network Manager to set the trace parameters in LISTENER.ORA and start the listener from the Listener Control Utility or command line. See <i>Understanding SQL*Net</i> for specific syntax.
----------	--



SQLNet

Connection Manager Use the Network Manager to set the trace parameters in INTCHG.ORA and start the Connection Manager from the Interchange Control Utility or command line. The pumps are started automatically with the Connection Manager, and their trace files are controlled by the trace parameters for the Connection Manager. See the *MultiProtocol Interchange Administrator's Guide* for specific syntax.



Intchg

Navigator Use the Network Manager to set the trace parameters in INTCHG.ORA and start the Navigator from the Interchange Control Utility or command line. See the *MultiProtocol Interchange Administrator's Guide* for specific syntax.



Intchg

Names server Use the Network Manager to set the trace parameters in NAMES.ORA and start the Names server from the Names Control Utility or command line. See the *Oracle Names Administrator's Guide* for specific syntax.



Names

Names Control Utility Set the trace parameters in SQLNET.ORA and start the Names Control Utility from the command line. See the *Oracle Names Administrator's Guide* for specific syntax.



Names

6. Be sure to turn tracing off when you do not need it for a specific diagnostic purpose.

Setting Trace Parameters

This section describes the configuration files that contain trace parameters and the trace files.

The trace parameters are defined in the same configuration files as the log parameters. Table 2-2 shows the configuration files for different network components and the default names of the trace files they generate.

Table 2 – 2
Trace Parameters and
Component Configuration Files

<i>Trace Parameters Corresponding to</i>	<i>Configuration Files</i>	<i>Output Files</i>
Client	SQLNET.ORA	SQLNET.TRC
Server		SQLNET.TRC
TNSPING Utility		TNSPING.TRC
Names Control Utility		NAMESCTL.TRC
Listener	LISTENER.ORA	LISTENER.TRC
Interchange	INTCHG.ORA	
Connection Manager		CMG.TRC
Pumps		PMP.TRC
Navigator		NAV.TRC
Names server	NAMES.ORA	NAMES.TRC

The configuration files for each component are located on the computer running that component.

The trace characteristics for two or more components of an Interchange are controlled by different parameters in the same configuration file. For example, there are separate sets of parameters for the Connection Manager and the Navigator that determine which components will be traced, and at what level.

Similarly, if there are multiple listeners on a single computer, each listener is controlled by parameters that include the unique listener name in the LISTENER.ORA file.

For each component, the configuration files contain the following information:

- a valid trace level to be used (Default is OFF)
- the trace file name (optional)

- the trace file directory (optional)

A summary of all trace parameters is provided in Tables 2-3 through 2-7.



OS Doc

See the Oracle operating system-specific documentation for your platform to determine where these files are expected to reside and where you can find sample files.

Summary of Trace Parameters

The three common trace parameters control the level of detail of the trace, the name of the trace file, and the location of the trace file. There are defaults for all three of these parameters. If you choose the defaults, you do not need to provide any values for the trace parameters. To change the defaults, use Oracle Network Manager.

Trace Levels

You can set trace levels to provide different amounts of trace information. For each component, there are three levels:

OFF	This setting signifies that no trace output should be generated. This setting is the default.
USER	This setting is intended for database administrators or users who are administering TNS products, but do not have extensive network knowledge. The USER trace level generates only English sentences describing high level significant networking events.
ADMIN	This setting is intended for network or database administrators with more knowledge of network terms and concepts. The ADMIN trace level generates all of the USER level statements plus additional information such as TNS addresses and detailed events.

The parameters are of the form:

```
TRACE_LEVEL_component = [OFF|USER|ADMIN]
```

For example, the following parameter, set in Oracle Network Manager, would produce trace output for the client at the administrator level.

```
TRACE_LEVEL_CLIENT = ADMIN
```

Trace File Names

You can control the name of the trace file for each component. A different trace file name of any valid string can be used. The parameters are of the form:

```
TRACE_FILE_component = string
```

For example, the following parameter would send listener trace output to a file called TEST.TRC on the server machine.

```
TRACE_FILE_LISTENER = TEST
```

Change the default rtrace file name using Oracle Network Manager.

Note: On most operating systems, the suffix .TRC is automatically appended to the file name you provide for the parameter; do not include the suffix when you enter the file name in Oracle Network Manager.

Note: You cannot change the default name, PMP.TRC, of the trace file for the pump.



OS Doc

Some platforms have restrictions on the properties of a file name. See your Oracle operating system-specific manuals for platform specific restrictions.

Trace File Directories

You can control the destination directory of the trace file for each component, except the Connection Manager and Navigator., through Oracle Network Manager.

Examples are specific to different operating systems. An example on a UNIX system might be:

```
TRACE_DIRECTORY_LISTENER = /tmp/trace
```



OS Doc

Some platforms have restrictions on the properties of a directory name. See your Oracle operating system-specific manuals for platform specific restrictions.

Unique Trace Files for Clients

Normally, when a new trace file is created for a client, it overwrites any existing trace file for that component. If you want to save an existing trace file, you must change its name before running the trace facility again. However, if the TRACE_UNIQUE_CLIENT parameter is set to ON, the trace facility appends a process identifier to the name of each trace file generated so that several can coexist. The format of the appended process identifier is platform specific. The default is OFF.

Note: Trace files are usually very large. If this parameter is set to ON, the number of large trace files created could interfere with the available disk space on your machine. Therefore, turn this parameter on only for specific reasons and delete the resulting files when they are no longer useful.

Unique Trace Files for Servers and Interchange Components

When tracing is turned on for servers or Interchange components, the trace files generated automatically have process identifiers attached, so

that new trace files do not overwrite existing ones. There is no parameter needed to control this feature. Be careful not to let too many trace files accumulate, however, as they are usually quite large.



Note: This feature is not implemented on all operating systems. See the Oracle operating system-specific documentation for your platform for further information.

OS Doc

Unique Trace Files for Names Servers

When tracing is turned on to trace a Names server, by default the trace files generated have process identifiers attached, so that new trace files do not overwrite existing ones. Be careful not to let too many trace files accumulate, however, as they are usually quite large. You can turn this feature off using Oracle Network Manager



Note: This feature is not implemented on all operating systems. See the Oracle operating system-specific documentation for your platform for further information.

OS Doc

Unique Trace Files for Names Control Utility

When tracing is turned on to trace the Names Control Utility itself, the trace files generated have process identifiers attached, so that new trace files do not overwrite existing ones. This feature is controlled by the `namesctl.trace_unique` parameter. Be careful not to let too many trace files accumulate, however, as they are usually quite large.



Note: This feature is not implemented on all operating systems. See the Oracle operating system-specific documentation for your platform for further information.

OS Doc

Valid SQLNET.ORA Diagnostic Parameters

The SQLNET.ORA file may contain optional parameters to control logging and tracing of clients and servers, and optional parameters for tracing the NAMESCTL program and the TNSPING utility.

Parameters for Clients and Servers

The following table shows the valid SQLNET.ORA parameters used in logging and tracing of SQL*Net version 2 clients and servers. A more detailed description of each parameter is available in Appendix A, "Trace and Log Parameter Reference."

**Table 2 – 3Client and Server
Diagnostic Parameters**

Parameters	Default	Values	Example (DOS client, UNIX server)
TRACE_LEVEL_CLIENT	OFF	[OFF USER ADMIN]	TRACE_LEVEL_CLIENT=USER
TRACE_FILE_CLIENT	SQLNET.TRC	string	TRACE_FILE_CLIENT=CLIENT
TRACE_DIRECTORY_CLIENT	O/S specific	valid directory	TRACE_DIRECTORY_CLIENT= c:\NET\ADMIN
TRACE_UNIQUE_CLIENT	OFF	ON	TRACE_UNIQUE_CLIENT=ON
LOG_FILE_CLIENT	SQLNET.LOG	string	LOG_FILE_CLIENT=CLIENT
LOG_DIRECTORY_CLIENT	O/S specific	valid directory	LOG_DIRECTORY_CLIENT=c:\NET\ADMIN
TRACE_LEVEL_SERVER	OFF	[OFF USER ADMIN]	TRACE_LEVEL_SERVER=ADMIN
TRACE_FILE_SERVER	SQLNET.TRC	string	TRACE_FILE_SERVER=unixsrv_2345.trc
TRACE_DIRECTORY_SERVER	O/S specific	valid directory	TRACE_DIRECTORY_SERVER=/tmp/trace
LOG_FILE_SERVER	SQLNET.LOG	string	LOG_FILE_SERVER=unixsrv.log
LOG_DIRECTORY_SERVER	O/S specific	valid directory	LOG_DIRECTORY_SERVER=/tmp/trace

Note: You control log and trace parameters for the client through Oracle Network Manager. You control log and trace parameters for the server by manually adding the desired parameters to the SQLNET.ORA file.

Parameters for Names Control Utility

The following table shows the valid SQLNET.ORA parameters used in tracing the Names Control Utility. A more detailed description of each parameter is available in Appendix A, “Trace and Log Parameter Reference.”

Note: You must add these parameters manually to the SQLNET.ORA file. You cannot create them using Oracle Network Manager.

**Table 2 – 4NAMESTL Utility
Diagnostic Parameters**

Parameters	Default	Values	Example (UNIX server)
NAMESTL.TRACE_LEVEL	Off	[OFF USER ADMIN]	NAMESTL.TRACE_LEVEL=user
NAMESTL.TRACE_FILE	namesctl.trc	file	NAMESTL.TRACE_FILE=nc_south.trc
NAMESTL.TRACE_DIRECTORY	O/S specific	directory	NAMESTL.TRACE_DIRECTORY= /oracle7/network/trace
NAMESTL.TRACE_UNIQUE	FALSE	TRUE/FALSE or ON/OFF	NAMESTL.TRACE_UNIQUE=TRUE

Parameters for
TNSPING

If you want to trace the TNSPING utility, you can add these parameters to SQLNET.ORA.

Note: You must add these parameters manually to the SQLNET.ORA file. You cannot create them using Oracle Network Manager.

Table 2 – 5TNSPING Diagnostic Parameters

<i>Parameters</i>	<i>Default</i>	<i>Values</i>	<i>Example (UNIX server)</i>
TNSPING.TRACE_LEVEL	Off	[OFF USER ADMIN]	TNSPING.TRACE_LEVEL=user
TNSPING.TRACE_DIRECTORY	O/S specific	directory	TNSPING.TRACE_DIRECTORY= /oracle7/network/trace

Valid LISTENER.ORA Diagnostic Parameters

The following table shows the valid LISTENER.ORA parameters used in logging and tracing of the listener. A more detailed description of each parameter is available in Appendix A, "Trace and Log Parameter Reference."

Table 2 – 6LISTENER.ORA Diagnostic Parameters

<i>Parameters</i>	<i>Default</i>	<i>Values</i>	<i>Example (VMS)</i>
TRACE_LEVEL_LISTENER	OFF	[OFF USER ADMIN]	TRACE_LEVEL_LISTENER=OFF
TRACE_FILE_LISTENER	LISTENER.TRC	string	TRACE_FILE_LISTENER=LISTENER
TRACE_DIRECTORY_LISTENER	O/S specific	valid directory	TRACE_DIRECTORY_LISTENER= SORA_SQLNETV2
LOG_FILE_LISTENER	LISTENER.LOG	string	LOG_FILE_LISTENER=LISTENER
LOG_DIRECTORY_LISTENER	O/S specific	valid directory	LOG_DIRECTORY_LISTENER=\$ORA_ ERRORS

Valid INTCHG.ORA Diagnostic Parameters

The following table shows the valid INTCHG.ORA parameters used in logging and tracing of the Interchange. A more detailed description of each parameter is available in Appendix A, “Trace and Log Parameter Reference.”

Table 2 – 7INTCHG.ORA Diagnostic Parameters

<i>Parameters</i>	<i>Default</i>	<i>Values</i>	<i>Example (OS/2 Interchange)</i>
TRACE_LEVEL_CMAMANAGER	OFF	[OFF USER ADMIN]	TRACE_LEVEL_CMAMANAGER=USER
TRACE_FILE_CMAMANAGER	CMG.TRC	string	TRACE_FILE_CMAMANAGER=CMAMANAGER
TRACE_DIRECTORY_CMAMANAGER	O/S specific	valid directory	TRACE_DIRECTORY_CMAMANAGER=C:\ADMIN
LOG_FILE_CMAMANAGER	INTCHG.LOG	string	LOG_FILE_CMAMANAGER=CMAMANAGER
LOG_DIRECTORY_CMAMANAGER	O/S specific	valid directory	LOG_DIRECTORY_CMAMANAGER=C:\ADMIN
LOGGING_CMAMANAGER	OFF	OFF ON	LOGGING_CMAMANAGER=OFF
LOG_INTERVAL_CMAMANAGER	60 minutes	Any number of minutes	LOG_INTERVAL_CMAMANAGER=60
TRACE_LEVEL_NAVIGATOR	OFF	[OFF USER ADMIN]	TRACE_LEVEL_NAVIGATOR=ADMIN
TRACE_FILE_NAVIGATOR	NAV.TRC	string	TRACE_FILE_NAVIGATOR=NAVIGATOR
TRACE_DIRECTORY_NAVIGATOR	O/S specific	valid directory	TRACE_DIRECTORY_NAVIGATOR=C:\ADMIN
LOG_FILE_NAVIGATOR	NAV.GATR.LOG	string	LOG_FILE_NAVIGATOR=NAVIGATOR
LOG_DIRECTORY_NAVIGATOR	O/S specific	valid directory	LOG_DIRECTORY_NAVIGATOR=C:\ADMIN
LOGGING_NAVIGATOR	OFF	OFF ON	LOGGING_NAVIGATOR=OFF
LOG_LEVEL_NAVIGATOR	ERRORS	ERRORS ALL	LOG_LEVEL_NAVIGATOR=ERRORS

Valid NAMES.ORA Diagnostic Parameters

The following table shows the valid NAMES.ORA parameters used in logging and tracing of the Names server. A more detailed description of each parameter is available in Appendix A, “Trace and Log Parameter Reference.”

Table 2 – 8NAMES.ORA Diagnostic Parameters

<i>Parameters</i>	<i>Default</i>	<i>Values</i>	<i>Example (UNIX server)</i>
NAMES.TRACE_LEVEL	OFF	[OFF USER ADMIN]	NAMES.TRACE_LEVEL=ADMIN
NAMES.TRACE_FILE	names.trc	file	NAMES.TRACE_FILE=nsrv3.trc
NAMES.TRACE_DIRECTORY	O/S specific	directory	NAMES.TRACE_DIRECTORY=/oracle7/network/trace
NAMES.TRACE_UNIQUE	FALSE	TRUE/FALSE or ON/OFF	NAMES.TRACE_UNIQUE=TRUE
NAMES.LOG_FILE	names.log	file	NAMES.LOG_FILE=nsrv1.log
NAMES.LOG_DIRECTORY	O/S specific	directory	NAMES.LOG_DIRECTORY=/oracle7/network/log

Examples of Tracing

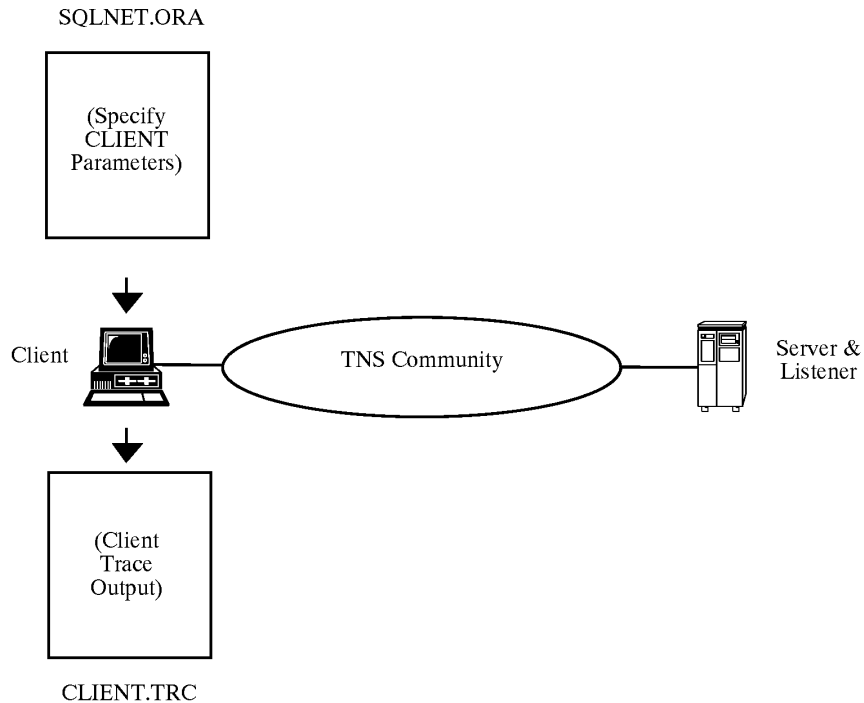
This section contains several examples of tracing possibilities. For each example the entries in the configuration files are shown with the relative locations of the trace configuration and files. The following trace options are demonstrated:

- tracing a client on a DOS machine
- tracing a listener
- tracing a server
- tracing both the listener and server
- tracing the Connection Manager and pumps
- tracing the Navigator
- tracing the Connection Manager, pumps, and Navigator

Example 1: Tracing a Client

Figure 2–1 shows a trace invoked by a client on a DOS machine. The client trace parameters are determined by the SQLNET.ORA file, and the trace output is generated to the CLIENT.TRC file on the client machine.

Figure 2 – 1
Tracing the Client Component



In Oracle Network Manager, on the Tracing page of the Client Profile property sheet, Level is set to USER. Trace File to CLIENT, and Trace Directory to C:\trace. The SQLNET.ORA would therefore contain the following entries:

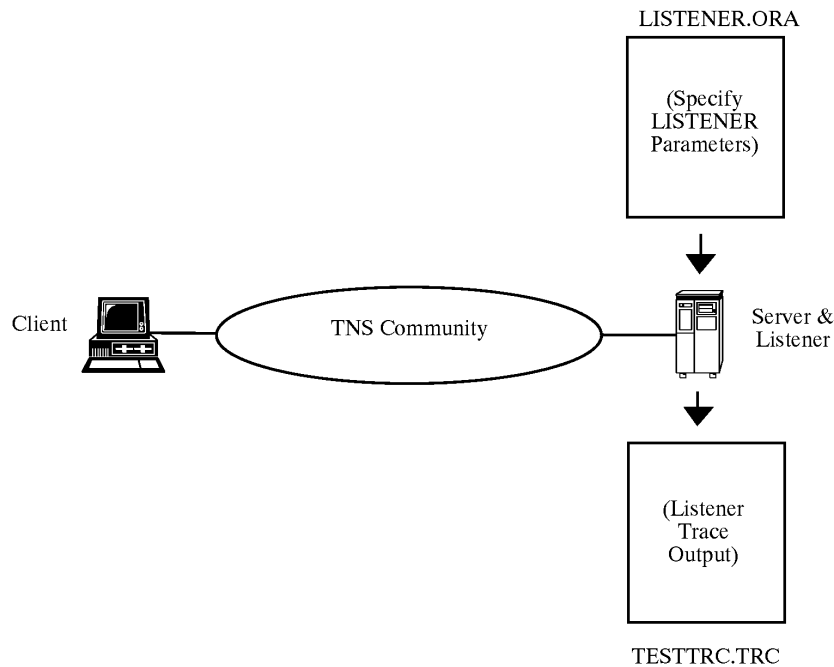
```
TRACE_LEVEL_CLIENT = USER
TRACE_FILE_CLIENT = CLIENT
TRACE_DIRECTORY_CLIENT = C:\TRACE
```

The first line sets the trace level, the second determines the name of the trace file, and the third indicates the location of the trace file.

Example 2: Tracing a Listener

Figure 2 – 2
Tracing the Listener
Component

Figure 2–2 shows an example of a listener trace on a computer running the UNIX operating system.



To activate this tracing, on the Tracing page of the Listener property sheet in Oracle Network Manager, set Trace Level to ADMIN and Trace File Name to testtrc. The listener parameter file LISTENER.ORA that invokes trace for the listener would then include the following lines:

```
TRACE_LEVEL_LISTENER = ADMIN
TRACE_FILE_LISTENER = TESTTRC
```

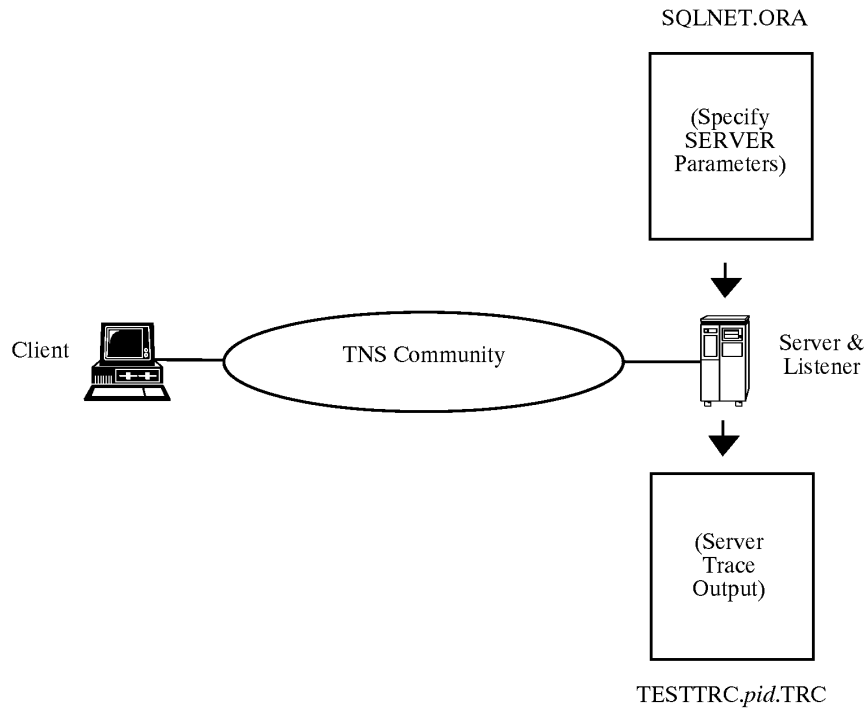
In this example, the trace would occur at the ADMIN level and the resulting trace information would be written to the TESTTRC.TRC file in the default trace file location for that platform. For example:

```
$ORACLE_HOME/network/trace/testtrc.trc
```

Example 3: Tracing a Server

Figure 2-3 shows an example of a server trace on a VAX machine.

Figure 2 - 3
Tracing the Server Component



To set tracing for the server, you must manually edit the SQLNET.ORA file. In this example, the server's SQLNET.ORA file would include the following lines:

```
TRACE_LEVEL_SERVER = ADMIN  
TRACE_FILE_SERVER = SERVER
```

The resulting trace file would be:

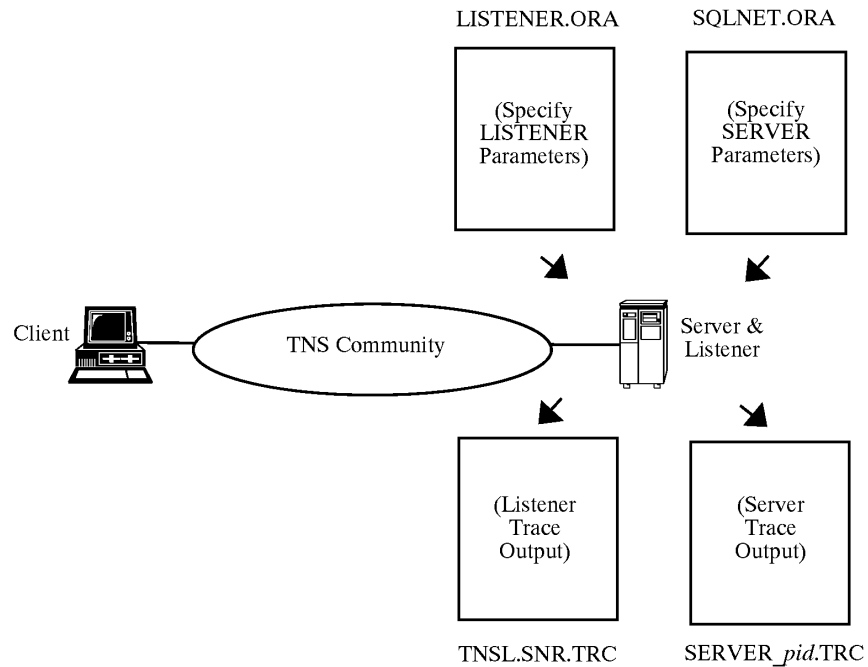
```
ORA_RDBMS:[NETWORK.TRACE]SERVER_44A17BEA.TRC
```

Note that the server's process identifier, in hexadecimal notation, is included in the trace file name.

Example 4: Tracing Both the Server and the Listener

Figure 2 – 4
Tracing the Server and Listener

Example 4 shows the configuration parameters used to produce trace files for both the server and listener on a VAX machine.



Since the server and the listener use separate configuration files, you must use two different files to invoke tracing for both the server and the listener. Parameters in the server's SQLNET.ORA file would be:

```
# SERVER Trace Parameters
TRACE_LEVEL_SERVER = ADMIN
TRACE_FILE_SERVER = SERVER
```

Trace parameters in the server's LISTENER.ORA file (set using Oracle Network Manager) would be:

```
# TNS Listener Trace Parameters
TRACE_LEVEL_LISTENER = ADMIN
TRACE_FILE_LISTENER = TNSLSNR
```

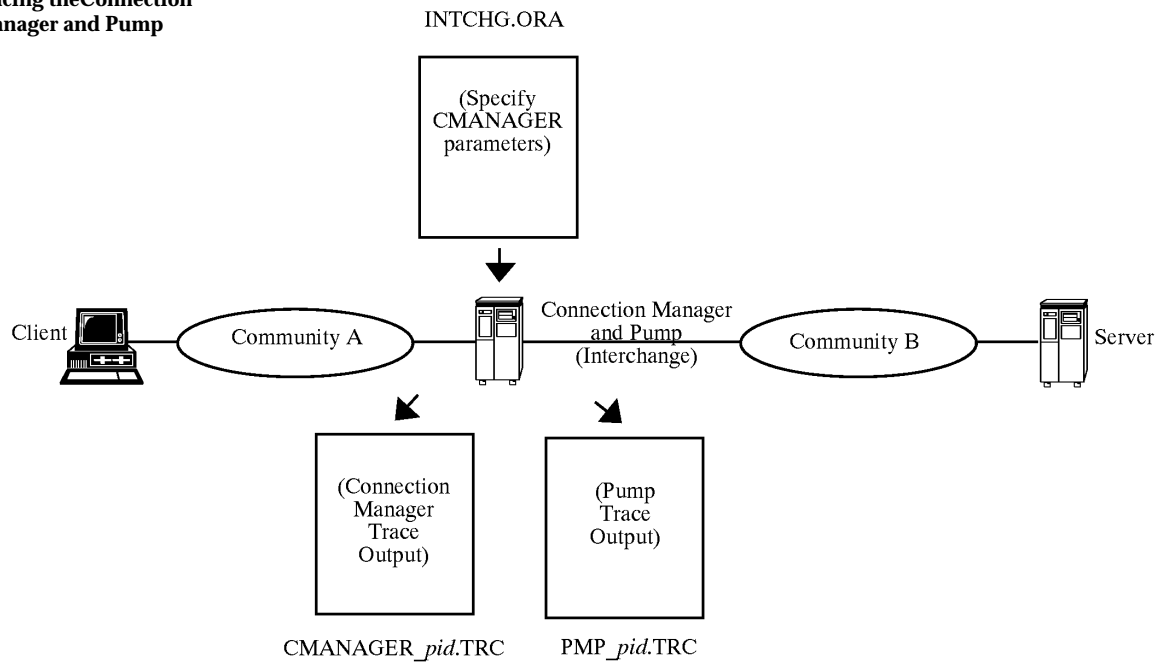
The resulting trace file names and directories would be:

```
ORA_RDBMS:[NETWORK.TRACE]SERVER_44A17BEA.TRC
ORA_RDBMS:[NETWORK.TRACE]TNSLSNR.TRC
```

Example 5: Tracing the Connection Manager and Pump

Figure 2 – 5
Tracing the Connection Manager and Pump

Figure 2–5 shows the configuration file used when tracing the Connection Manager and pump components of the MultiProtocol Interchange on a machine running OS/2.



On the Connection Tracing page of the Interchange property sheet in Oracle Network Manager, Tracing Level is set to ADMIN, and Trace File Name is designated as CMNGR. The INTCHG.ORA configuration file therefore includes the following lines:

```
TRACE_LEVEL_CMANAGER = ADMIN
TRACE_FILE_CMANAGER = CMNGR
```

These parameters specify tracing for the Connection Manager and pump components of the Interchange at the administrator level, and a non-default name for the Connection Manager trace file.

Note: The pump component shares the trace parameters of the Connection Manager, but it generates a separate trace file with the unchangeable default name *PMPpid.TRC*.

Based on these parameters, the trace files generated would be:

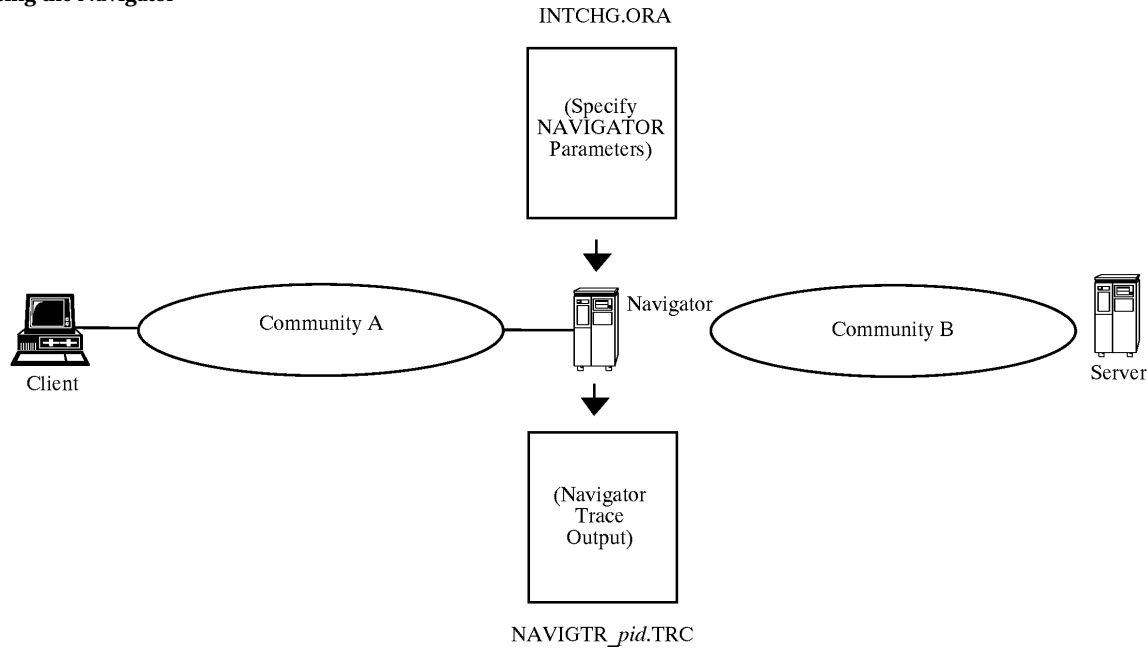
```
C:\ORAOS2\NETWORK\TRACE\PMP2A.TRC
C:\ORAOS2\NETWORK\TRACE\CMNGR7B.TRC
```


Note that the trace file names include process identifiers in hexadecimal notation.

Example 6: Tracing the Navigator

Figure 2-6 shows the configuration file used and the resulting trace file generated for a Navigator on a system running UNIX.

Figure 2 – 6
Tracing the Navigator



On the Navigation Tracing page of the Interchange property sheet in Oracle network Manager, Trace Level is set to ADMIN, Trace File is set to NAVIGTR, and Trace Directory to /tmp/trace. The INTCHG.ORA component configuration file therefore contains the following lines:

```
# Navigator Trace Parameters
TRACE_LEVEL_NAVIGATOR = ADMIN
TRACE_FILE_NAVIGATOR = NAVIGTR
TRACE_DIRECTORY_NAVIGATOR=/tmp/trace
```

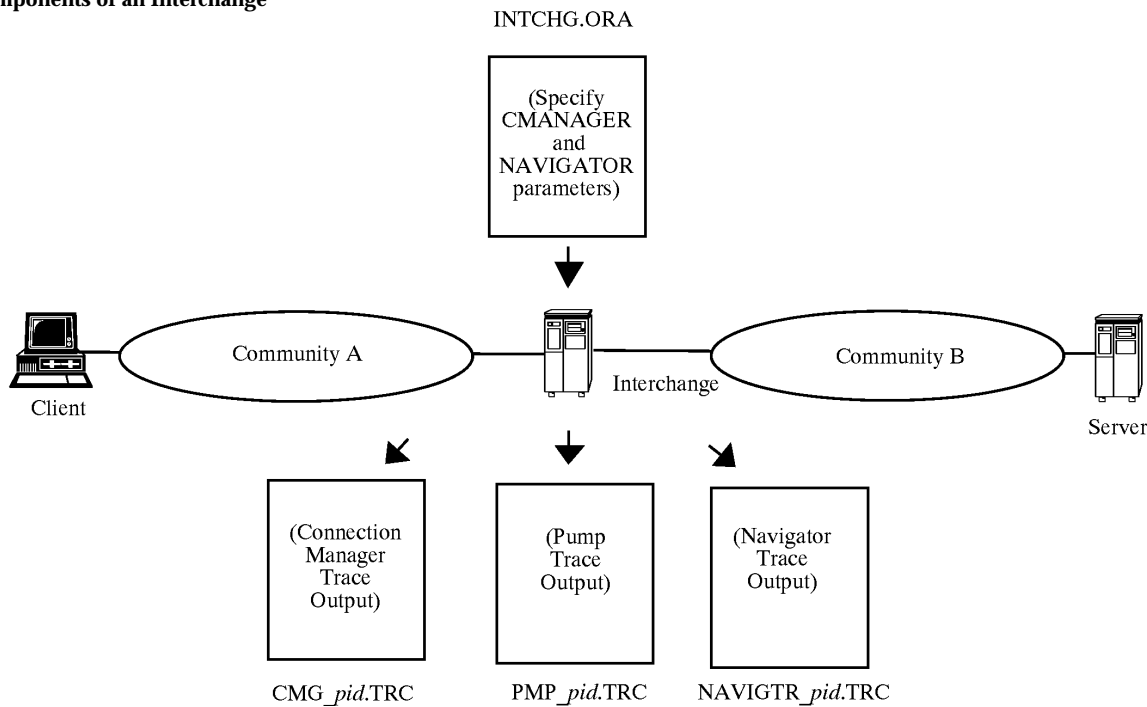
These parameters indicate that the Navigator is to be traced at the administrator level with a trace file named NAVIGTR_pid.TRC to be located in /tmp/trace; for example:

```
/tmp/trace/NAVIGTR_9453.TRC
```

Example 7: Tracing the Connection Manager, Pump, and Navigator

Figure 2–7 shows the configuration file used when tracing the Connection Manager, pump, and Navigator, and the trace files that are generated.

Figure 2 – 7Tracing All Components of an Interchange



The trace parameters are set in the tracing pages of the Interchange property sheet in Oracle Network Manager. On the Connection Tracing page, Trace Level is set to ADMIN. On the Navigation Tracing page, Trace Level is set to ADMIN and Trce File Name is set to NAVIGTR.

The INTCHG.ORA configuration file therefore includes the following lines:

```
# Interchange Connection Manager Parameters
# Use default name of CMG.TRC for trace file
# Pump trace is controlled by Connection Manager parameters
TRACE_LEVEL_CMANAGER = ADMIN
#
# Navigator Trace Parameters
TRACE_LEVEL_NAVIGATOR = ADMIN
TRACE_FILE_NAVIGATOR = NAVIGTR
```

These parameters specify the Connection Manager, pump, and Navigator to be traced at the administrator level. The Connection Manager trace file will use the default file name, but the Navigator trace file will be created with a specified name. Note that no TRACE_LEVEL parameter is specified for the pump, because the pump shares the TRACE_LEVEL parameter with the Connection Manager; the pump's trace file name cannot be changed.

Example of a Trace File

In the following example, the SQLNET.ORA file includes the following line:

```
TRACE_LEVEL_CLIENT = ADMIN
```

The following trace file is the result of a connection attempt that failed because the hostname is invalid.

The trace output is a combination of debugging aids for Oracle specialists and English information for network administrators. Several key events can be seen by analyzing this output from beginning to end:

- The client describes the outgoing data in the connect descriptor used to contact the server.
- An event is received (connection request).
- A connection is established over the available transport (in this case TCP/IP).
- The connection is refused by the application, which is the listener.
- The trace file shows the problem, as follows:
-<FATAL?>- *** hostname lookup failure! ***
- Error 12545 is reported back to the client.

If you look up Error 12545 in Chapter 3 of this Manual, you will find the following description:

ORA-12545 TNS:Name lookup failure

Cause A protocol specific ADDRESS parameter cannot be resolved.

Action Ensure the ADDRESS parameters have been entered correctly; the most likely incorrect value is the node name.

```

--- TRACE CONFIGURATION INFORMATION FOLLOWS ---
New trace stream is "/privatel/oracle/trace_admin.trc"
New trace level is 6
--- TRACE CONFIGURATION INFORMATION ENDS ---

--- PARAMETER SOURCE INFORMATION FOLLOWS ---
Attempted load of system pfile source
/privatel/oracle/network/admin/sqlnet.ora
Parameter source was not loaded
Error stack follows:
NL-00405: cannot open parameter file

Attempted load of local pfile source /home/ginger/.sqlnet.ora
Parameter source loaded successfully

-> PARAMETER TABLE LOAD RESULTS FOLLOW <-
Some parameters may not have been loaded
See dump for parameters which loaded OK
-> PARAMETER TABLE HAS THE FOLLOWING CONTENTS <-
  TRACE_DIRECTORY_CLIENT = /privatel/oracle
  trace_level_client = ADMIN
  TRACE_FILE_CLIENT = trace_admin
--- PARAMETER SOURCE INFORMATION ENDS ---

--- LOG CONFIGURATION INFORMATION FOLLOWS ---
Attempted open of log stream "/privatel/oracle/sqlnet.log"
Successful stream open
--- LOG CONFIGURATION INFORMATION ENDS ---

```

Loading parameter files

```

Unable to get data from navigation file tnsnav.ora
local names file is /home/ginger/.tnsnames.ora
system names file is /etc/tnsnames.ora
initial retry timeout for all servers is 500 csecs
max request retries per server is 2
default zone is [root]
Using nncin2a() to build connect descriptor for (possibly remote)
database.
initial load of /home/ginger/.tnsnames.ora
-<ERROR>- failure, error stack follows
-<ERROR>- NL-00405: cannot open parameter file
-<ERROR>- NOTE: FILE CONTAINS ERRORS, SOME NAMES MAY BE MISSING

initial load of /etc/tnsnames.ora
-<ERROR>- failure, error stack follows
-<ERROR>- NL-00427: bad list
-<ERROR>- NOTE: FILE CONTAINS ERRORS, SOME NAMES MAY BE MISSING

Inserting IPC address into connect descriptor returned from
nncin2a().

```

Reading parameter files

Looking for routing information	{	<pre> Calling address: (DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala) (USER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=ipc (KEY=bad_host))(ADDRESS=(PROTOCOL=tcp)(HOST=lavender) (PORT=1521)))) Getting local community information Looking for local addresses setup by nrigla No addresses in the preferred address list TNSNAV.ORA is not present. No local communities entry. Getting local address information Address list being processed... No community information so all addresses are "local" Resolving address to use to call destination or next hop Processing address list... No community entries so iterate over address list This a local community access Got routable address information </pre>				
		Calling first address (IPC)	{	<pre> Making call with following address information: (DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=ipc)(KEY=bad_host))) Calling with outgoing connect data (DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala) (USER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=tcp) (HOST=lavender)(PORT=1521)))) (DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=ipc)(KEY=bad_host))) KEY = bad_host connecting... opening transport... -<ERROR>- sd=8, op=1, resnt[0]=511, resnt[1]=2, resnt[2]=0 -<ERROR>- unable to open transport -<ERROR>- nsres: id=0, op=1, ns=12541, ns2=12560; nt[0]=511, nt[1]=2, nt[2]=0 connect attempt failed Call failed... Call made to destination Processing address list so continuing </pre>		
				Looking for routing information	{	<pre> Getting local community information Looking for local addresses setup by nrigla No addresses in the preferred address list TNSNAV.ORA is not present. No local communities entry. Getting local address information Address list being processed... No community information so all addresses are "local" Resolving address to use to call destination or next hop Processing address list... No community entries so iterate over address list This a local community access Got routable address information </pre>

Calling second address (TCP/IP)

```
Making call with following address information:
(DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=tcp)
(HOST=lavender)(PORT=1521)))
Calling with outgoing connect data
(DESCRIPTION=(CONNECT_DATA=(SID=trace)(CID=(PROGRAM=)(HOST=lala)
(USER=ginger)))(ADDRESS_LIST=(ADDRESS=(PROTOCOL=tcp)
(HOST=lavender)(PORT=1521))))
(DESCRIPTION=(EMPTY=0)(ADDRESS=(PROTOCOL=tcp)
(HOST=lavender)(PORT=1521)))
port resolved to 1521
looking up IP addr for host: lavender

--<FATAL?>-   *** hostname lookup failure! ***

--<ERROR>- nsres: id=0, op=13, ns=12545, ns2=12560; nt[0]=515,
nt[1]=0, nt[2]=0
Call failed...
Exiting NRICALL with following termination result -1
--<ERROR>-   error from nricall
--<ERROR>-   nr err code: 12206
--<ERROR>-   ns main err code: 12545
--<ERROR>-   ns (2)   err code: 12560
--<ERROR>-   nt main err code: 515
--<ERROR>-   nt (2)   err code: 0
--<ERROR>-   nt OS    err code: 0
--<ERROR>- Couldn't connect, returning 12545
```

Most tracing is very similar to this. If you have a basic understanding of the events the components will perform, you can identify the probable cause of an error in the text of the trace.

Networking Error Messages

This chapter lists the error messages that may be returned by the following Oracle network components:

- SQL*Net release 2.0 and later
 - client
 - server
 - listener
- MultiProtocol Interchange release 2.0 and later
 - Connection Manager
 - Pump
 - Navigator
- MultiProtocol Interchange Control Program
- Transparent Network Substrate (TNS)
- Oracle Protocol Adapters
- Secure Network Services
- Native Naming

Oracle network product error messages are identified by two prefixes. The first prefix is "ORA-" and the other is "TNS-." Error messages

beginning with the "ORA-" prefixes are generated by the Oracle Server and other Oracle utilities. The error numbers within the range from 12150 through 12629 are network related errors, and these errors contain text that begins with "TNS:" Error messages from 12630 through 12699 are generated by Secure Network Services.

Please consult the appropriate documentation for detailed information on other "ORA-" prefixed errors outside this range. For more information on the error message prefixes, please refer to Chapter 1, "Coping with Error Messages."

Table 3-1 shows the networking software components that generate error messages with "ORA" or "TNS" prefixes.

Table 3 - 1
Error Message Prefix, Numbers,
and Components

<i>Prefix</i>	<i>Error Number</i>		<i>Component</i>	<i>Type of Error</i>
TNS	1	to 500	NR (routing)	MultiProtocol Interchange
TNS	501	to 1000	NT (transport)	Protocol Adapter
TNS	1001	to 1500	Listener Control Program	Listener Control Program
ORA/TNS	12150	to 12195	SQL*Net	Oracle SQL*Net
ORA/TNS	12196	to 12285	NR (routing)	TNS
ORA/TNS	12500	to 12530	Listener	Listener to client
ORA/TNS	12531	to 12629	NS (session)	TNS
ORA	12630	to 12699	NA	Native Services

Interchange Control Utility (NR) Error Messages (TNS-00001 to 00099)

- TNS-00001

INTCTL: error while getting command line from the terminal
- Cause

Improper standard input connection from the terminal.
- Action

Normally not visible to the user. Start the INTCTL program again. If error persists, contact Worldwide Customer Support.

TNS-00002 INTCTL: error while starting the Interchange

Cause The Interchange could not be started.

Action Check the Interchange configuration files (INTCHG.ORA, TNSNET.ORA, and TNSNAV.ORA) for errors and confirm that no other programs are using the ADDRESS(es) specified. If error continues, turn on tracing in the Interchange components and examine the trace files to determine the cause of the problem. Be sure to turn tracing off when the problem has been rectified.

TNS-00003 INTCTL: error while sending the request to the Interchange

Cause Improper command sent to the Interchange or the Interchange is not responding. Not normally visible to the user.

Action Verify that the command sent to the Interchange is valid. Also check that the Interchange is running by using the INTCTL STATUS command. If necessary, start the Interchange using the INTCTL START command.

TNS-00004 INTCTL: error while starting the Navigator

Cause The Navigator could not be started.

Action Check to make sure that executables for the Navigator (navgatr) are present in the ORACLE executable directory on your platform. Check the configuration files TNSNET.ORA and TNSNAV.ORA for errors. If error continues, turn on tracing in the Interchange components and examine the trace files to determine the cause of the problem. Be sure to turn tracing off when the problem has been rectified.

TNS-00005 INTCTL: error while sending request to the Navigator

Cause The Navigator is not responding. Either the Navigator is not running or another process is responding. Not normally visible to the user.

Action Check that the Navigator is running by using the STATUS command of the Interchange Control Utility. Verify that the correct addresses are listed in the TNSNAMES.ORA, TNSNET.ORA, and TNSNAV.ORA configuration files.

TNS-00006 INTCTL: HOST variable is not defined

Cause The HOST variable was not set.

Action Set the HOST variable properly and restart the INTCTL program.

TNS-00007 INTCTL: unknown host

Cause The pointer HOST is set to an unknown hostname.

Action Set the pointer HOST properly and restart INTCTL program.

TNS-00008 INTCTL: could not contact destination Navigator

Cause Connection could not be established to a Navigator. This may be because the Navigator specified is not running or the Navigator addresses are incorrect.

Action Check that the Navigator is running by using the STATUS command of the Interchange Control Utility; if necessary, start the Navigator using the START command of the Interchange Control Utility. If it is running and the error persists, contact Worldwide Customer Support.

TNS-00009 INTCTL:could not contact destination Connection Manager

Cause Connection could not be established to a Connection Manager. This may be because the Connection Manger (Interchange) specified is not running or the Connection Manger addresses are incorrect.

Action Make sure that the Connection Manager is running by using the STATUS command of the Interchange Control Utility; if necessary, start the Connection Manager using the START command of the Interchange Control Utility. If it is running and the error persists, contact Worldwide Customer Support.

TNS-00010 INTCTL: Error while flushing NS context

Cause Internal NS error; connection may be lost.

Action Make sure the connection is properly established. If the error persists, then contact Worldwide Customer Support.

TNS-00011 INTCTL: error while starting the Connection Manager

Cause The Connection Manager could not be started.

Action Assure that the executable can be found in the standard Oracle executable area. Check the configuration file INTCHG.ORA for errors and confirm that no other process is using the ADDRESS(es) for this Connection Manager as specified in TNSNET.ORA.

Tracing can also be turned on in the Connection Manager and detailed information about the reason for the error determined. Consult the *MultiProtocol Interchange Administrator's Guide* and Chapter 2 in this manual for how to turn on tracing.

TNS-00012	INTCTL: error while processing Connection Manager request
Cause	An improper command was sent to the Connection Manager or it is not responding. Not normally visible to the user.
Action	Verify that the correct addresses are listed in the TNSNAMES.ORA, TNSNET.ORA, and TNSNAV.ORA configuration files. Also check that the Connection Manager is running by using the STATUS command of the Interchange Control Utility. If the error persists, contact Worldwide Customer Support.
TNS-00013	INTCTL: error while performing NS disconnect command
Cause	Internal NS error. Error in closing down connections.
Action	Make sure the networking protocol being used is properly installed on the machine. If the error persists, contact Worldwide Customer Support.
TNS-00014	INTCTL: error while opening terminal input channel
Cause	Could not open standard terminal input. Internal error.
Action	Normally not visible to the user. Restart the INTCTL program. If error persists, contact Worldwide Customer Support.
TNS-00015	INTCTL: error while closing terminal input channel
Cause	Could not close terminal input channel. Internal error.
Action	Normally not visible to the user. Restart the INTCTL program. If the error persists, contact Worldwide Customer Support.
TNS-00016	INTCTL: error while performing NS send command
Cause	Internal NS error. Connection may be lost.
Action	If error persists contact Worldwide Customer Support.
TNS-00017	INTCTL: error while performing NS receive command
Cause	Internal NS error. Connection may be lost.
Action	If error persists contact Worldwide Customer Support.

TNS-00018	INTCTL: TNS_ADMIN not defined
Cause	The TNS_ADMIN pointer is improperly set.
Action	No action necessary; TNS_ADMIN need only be set if you want to use a different network environment.
TNS-00019	INTCTL: error initializing the national language interface
Cause	The message file could not be found.
Action	Make sure that the ORACLE environment is set and that the message file is in the correct place.
TNS-00020	INTCTL: missing NAVIGATOR_DATA in TNSNAV.ORA
Cause	TNSNAV.ORA does not contain the NAVIGATOR_DATA component.
Action	Define the ADDRESS(es) for the Navigator, then restart the INTCTL program.
TNS-00021	INTCTL: missing INTERCHANGE_DATA in INTCHG.ORA
Cause	INTCHG.ORA does not contain an INTERCHANGE_DATA component.
Action	Define the correct data for the Connection Manager, then restart the INTCTL program.
TNS-00022	INTCTL: missing CMANAGER_NAME in INTCHG.ORA
Cause	The file INTCHG.ORA does not contain a CMANAGER_NAME component.
Action	Define the correct name for the CMANAGER_NAME, then restart the INTCTL program. Use of the Oracle Network Manager should eliminate this error.
TNS-00023	INTCTL: missing ADDRESS(es) in config files
Cause	onfiguration files do not contain an ADDRESS/ADDRESS_LIST component.
Action	Define the Connection Manager ADDRESS(es) in the TNSNET.ORA file and check the Navigator ADDRESS(es) in the TNSNAV.ORA file, then restart the INTCTL program.

- TNS-00024 INTCTL: unable to contact the Navigator to obtain Connection Manager address**
- Cause** The Navigator is not running.
- Action** Verify that the Navigator is running by doing a status request on the Navigator (use the Interchange Control Utility command STATUS). If necessary, start the Navigator, using the Interchange Control Utility. Verify that the network is properly configured; if possible, use the Oracle Network Manager to generate the configuration files. If the error persists, contact Worldwide Customer Support.
-
- TNS-00025 INTCTL: the ORACLE environment is not set up correctly**
- Cause** The ORACLE environment is incorrectly set up.
- Action** Refer to the Oracle operating system specific documentation for your platform for information on how the ORACLE environment should be set. Correct it and rerun INTCTL. Make sure the ORACLE environment includes the correct directories.
-
- TNS-00026 INTCTL: TNS_ADMIN directory set, and is being used**
- Cause** The TNS_ADMIN environment variable is set properly. INTCTL will use the TNS_ADMIN directory. This is only an informative message. If you do not want it to be used, and want the default directory to be used instead, then unset TNS_ADMIN and reexecute.
- Action** None.
-
- TNS-00027 INTCTL: could not resolve Navigator's name/address**
- Cause** The Navigator's name to address definition is missing.
- Action** Check TNSNAMES.ORA file and make sure to include a definition for the name specified.
-
- TNS-00028 INTCTL: could not resolve Connection Manager's name/address**
- Cause** The Connection Manager's name does not have a definition that the Navigator knows about, nor is the name/address available in the TNSNAMES.ORA file. The name may also be incorrect in the INTCHG.ORA file.
- Action** Verify that the Connection Manager's name is in the TNSNET.ORA file read by the Navigator or in the TNSNAMES.ORA file. Be sure that INTCHG.ORA is correct.

TNS-00031	INTCTL: internal NT error
Cause	Problem interfacing to the protocol adapters installed.
Action	Normally not visible to the user. Try starting INTCTL again. If the error persists, check the product installation. If it is correct, contact Worldwide Customer Support.
TNS-00032	INTCTL:internal NS error
Cause	Problem interfacing with TNS.
Action	Normally not visible to the user. Try starting INTCTL again. If the error persists, check the product installation. If it is correct, contact Worldwide Customer Support.
TNS-00033	INTCTL:internal NL error
Cause	Problem with internal TNS module NL.
Action	Normally not visible to the user. Try starting INTCTL again. If the error persists, check the product installation. If it is correct, contact Worldwide Customer Support.
TNS-00034	INTCTL :internal NR error
Cause	Problem with internal Interchange routines.
Action	Normally not visible to the user. Try starting INTCTL again. If the error persists, check the product installation. If it is correct, contact Worldwide Customer Support.
TNS-00035	INTCTL: error while constructing full file name
Cause	Problem while constructing the full path for a file name because the path name to the file or the environment variables are incorrect. Files looked up include TNSNAMES.ORA, TNSNAV.ORA, INTCHG.ORA, and the error files for the Navigator and Connection Manager.
Action	Check that all environment variables are defined correctly and that all configuration files exist in their correct places.
TNS-00036	INTCTL: error reading from Navigator or Connection Manager error files
Cause	Problem while reading from error files generated by the Navigator or Connection Manager when they fail to start.
Action	Check that a standard Network Error directory exists and that all privileges on the directory are appropriate.

TNS-00037	INTCTL: error opening Navigator or Connection Manager error files
Cause	Failed to open Navigator or Connection Manager error files when they have failed to start.
Action	Check that a Network Error directory exists and that all privileges on the directory are appropriate.
TNS-00038	INTCTL: poorly formed address or command string
Cause	An unacceptable string was encountered while attempting to send a message to either the Navigator or Connection Manager. The addresses provided for either the Navigator or Connection Manager may be incorrectly constructed.
Action	Check all address strings in configuration files (TNSNAMES.ORA, TNSNAV.ORA, or TNSNET.ORA) and assure that they are properly formed. Regenerate the files using the Oracle Network Manager, if possible. If all addresses are correct and the problem persists, please contact Worldwide Customer Support.
TNS-00039	INTCTL: error while spawning a process
Cause	An error was encountered while spawning a process, due to an internal operating system dependent problem. Machine resources may be limited.
Action	Retry command. Check permissions on Interchange executables and the current setting of the search path. If necessary, terminate other applications to free up machine resources. If the error persists, contact Worldwide Customer Support.
TNS-00040	INTCTL: failed to initialize trace context- Continuing anyway
Cause	Problem while opening specified trace file because of errors in INTCHG.ORA or because the user has incorrect privileges, or the file does not exist.
Action	Check the privileges on the configuration files and ensure that all of them exist in their proper locations.
TNS-00041	INTCTL: Navigator already running. Start operation cancelled
Cause	There is a Navigator already running and listening on the same addresses.
Action	None; the Navigator is already running.
TNS-00042	INTCTL: Cmanager already running. Start operation cancelled
Cause	There is a Connection Manager already running and listening on the same addresses.
Action	None; the Connection Manager is already running.

- TNS-00043** **INTCTL: the CMANAGER has active connections, do you still want to stop it (y/n)?**
- Cause** The CMANAGER that is being stopped has active connections going through. This is a confirmation message.
- Action** Respond by pressing y or n. Answering y will cause the active database connection to be dropped; this is not generally recommended.
-
- TNS-00044** **INTCTL: you must have an INTCHG.ORA file to contact the Connection Manager**
- Cause** There was an attempt to contact a default Connection Manager (Interchange) where there was no INTCHG.ORA present in the correct directory.
- Action** Create an INTCHG.ORA file using the Oracle Network Manager and make sure it is placed in the correct directory and includes the correct name for the Connection Manager you wish to contact.
-
- TNS-00045** **INTCTL: could not contact the Navigator on address**
- Cause** There was an attempt to contact a Navigator on a specific address, which is not responding.
- Action** Check that a TNSNAV.ORA file containing the correct local communities exists for that address. Also check that the Navigator is actually listening on that address by using the INTCTL STATUS command. If necessary, start the Navigator using the INTCTL START command.
-
- TNS-00046** **INTCTL: Could not contact the Connection Manager on address**
- Cause** There was an attempt to contact a CMANAGER on a specific address, which is not responding.
- Action** Verify that the TNSNET.ORA file contains that address. Also check that the CMANAGER is actually listening on that address by using the INTCTL STATUS command. If necessary, start the Connection Manager using the INTCTL START command.
-
- TNS-00060** **INTCTL: Bad command: only the STATUS command can be used on remote Interchanges**
- Cause** The user entered a command that does not exist, or the user tried to make a request other than STATUS to a remote Interchange.
- Action** Check the *MultiProtocol Interchange Administrator's Guide* for a list of INTCTL commands or type HELP for a list of valid commands.

- TNS-00061 INTCTL: Bad command or syntax error: you must specify a trace level**
- Cause** The user did not specify a trace level.
- Action** Specify a trace level and retry command.
-
- TNS-00062 INTCTL: Bad command or syntax error: For help type "help" or "h" or "?"**
- Cause** The user entered an invalid command.
- Action** Check the *MultiProtocol Interchange Administrator's Guide* or type HELP for a list of valid commands.
-
- TNS-00063 INTCTL: Failed to allocate memory for buffers**
- Cause** INTCTL was unable to allocate memory for internal buffers.
- Action** Check the amount of available memory on your machine to ensure that there is enough memory to run this executable. If necessary, free up memory by running fewer programs, then try again.
-
- TNS-00064 INTCTL: Failed to find CMANAGER_NAME in INTCHG.ORA**
- Cause** INTCTL was unable to find the CMANAGER_NAME parameter in INTCHG.ORA.
- Action** Check that the INTCHG.ORA file is properly constructed.
-
- TNS-00065 INTCTL: Command cannot be executed remotely**
- Cause** A command other than status and version has been attempted remotely.
- Action** If you desire to execute any command other than status and version, you must run INTCTL on the Interchange machine.

Interchange Error Messages (TNS-00100 to 00499)

- TNS-00100 Unable to allocate memory**
- Cause** INTCTL was unable to allocate memory for internal buffers.
- Action** Check the amount of available memory on your machine to ensure that there is enough memory to run this executable. If necessary, free up memory by running fewer programs, then try again.

TNS-00101	File Operation Error
Cause	Error in accessing, reading, or writing a particular file.
Action	Check the existence of, or operating system access to, the log and trace file locations.
TNS-00102	Keyword-Value binding operation error
Cause	Not normally visible to the user. May indicate a shortage of memory.
Action	If error persists contact Worldwide Customer Support.
TNS-00103	Parameter file load error
Cause	Parameter file process failed.
Action	Check to make sure that all parameter files necessary for the Interchange are present (TNSNAV.ORA, TNSNET.ORA and INTCHG.ORA). If these files are present and properly configured, turn on tracing and repeat the operation. Turn off tracing when the trace is complete. Look in the trace file for errors in the parameter loading process. If error persists contact Worldwide Customer Support.
TNS-00104	Data stream open/access error
Cause	Unable to open or access data stream for either log or trace files for the Interchange.
Action	Check read/write permissions on Oracle trace and log files and directories. Check for sufficient available space on disk.
TNS-00105	Could not initialize tracing
Cause	The INTCHG.ORA file is improperly configured. Verify the trace parameters specified in INTCHG.ORA.
Action	If error persists contact Worldwide Customer Support.
TNS-00106	Failed to open log file
Cause	Unable to access or obtain write permission to create log file.
Action	Check existence of or access to log file directory.

TNS-00107 Unable to initialize TNS global data

Cause Not normally visible to the user. This error may be caused by insufficient memory on machine

Action Add more resources. If error persists contact Worldwide Customer Support.

TNS-00108 TNS_ADMIN not defined

Cause TNS_ADMIN pointer is not set.

Action Set the TNS_ADMIN pointer before running application.

TNS-00109 Message could not be printed; not enough memory

Cause Printing of message failed due to lack of memory. Not normally visible to the user.

Action Increase the resources on your machine. If error persists contact Worldwide Customer Support.

TNS-00110 Could not initialize network from file TNSNET.ORA

Cause Poorly formed network information in network file.

Action Check network configuration data to assure that at least one Interchange is defined in TNSNET.ORA. Regenerate the file using the Oracle Network Manager if possible.

TNS-00111 Failed to get configuration data from TNSNET.ORA or TNSNAV.ORA

Cause Poorly formed configuration information in network files TNSNET.ORA or TNSNAV.ORA.

Action Check TNSNET.ORA and TNSNAV.ORA to confirm that they are correct.

TNS-00112 Failed to find configuration file name

Cause Name specified for configuration file was incorrect.

Action Check for presence of the configuration file.

TNS-00113	Failed to open error log file
Cause	Could not open error log file during startup of Navigator or Connection Manager due to read or write permission problems or non-existent error directory.
Action	Create the standard error directory or assure that if one is present the Interchange executables can write to it.
TNS-00114	Internal error- Allocation of addresses not performed
Cause	Internal error. Should not normally occur.
Action	Contact Worldwide Customer Support.
TNS-00115	Could not allocate pump global buffers
Cause	Not enough memory to allocate pump buffers.
Action	Decrease the number of PUMP_BUFFERS in INTCHG.ORA.
TNS-00116	Pump failed during initial bequeath
Cause	Error in assigning connection to a new pump. This error may be caused by insufficient machine resources.
Action	Attempt the connection again. The pump should recover from such a failure. If machine resources appear to be the problem, add more resources or shut down some active applications. If the problem persists, contact Worldwide Customer Support.
TNS-00117	Internal error- No data passed through pump
Cause	Internal error. Data expected has not arrived yet.
Action	If error persists, contact Worldwide Customer Support.
TNS-00119	Missing PUMP_CONNECTIONS in INTCHG.ORA
Cause	No PUMP_CONNECTIONS parameter specified in INTCHG.ORA.
Action	Add PUMP_CONNECTIONS parameter to INTCHG.ORA. If the file is generated by the Oracle Network Manager, this error should not occur.

TNS-00120 Missing PUMPS in INTCHG.ORA

Cause No PUMPS parameter specified.

Action Add an appropriate number of PUMPS to INTCHG.ORA. Use the Oracle Network Manager to generate the configuration files.

TNS-00121 Missing CMANAGER_NAME in INTCHG.ORA

Cause No CMANAGER_NAME specified in INTCHG.ORA.

Action Define the CMANAGER_NAME parameter in INTCHG.ORA; it must match the CMANAGER_NAME parameter used in TNSNET.ORA for that Interchange. This will happen automatically if the Oracle Network Manager is used.

TNS-00122 Missing ADDRESS(es) in TNSNET.ORA file

Cause No ADDRESS or ADDRESS_LIST parameter specified in TNSNET.ORA.

Action Define a valid set of ADDRESSes for the Connection Manager in the TNSNET.ORA file.

TNS-00123 Unable to perform a listen on configured ADDRESS(es)

Cause Another process is already listening on this address or the ADDRESS is incorrectly defined.

Action Check the ADDRESS(es) defined in TNSNET.ORA (for the Connection Manager) for errors. Verify that another program is not using them.

TNS-00124 Internal error – Unable to create empty address

Cause Internal error. Should not normally occur.

Action If problem persists contact Worldwide Customer Support.

TNS-00125 Failed to get number of Interchanges in TNSNET.ORA

Cause Error in the TNSNET.ORA file.

Action Check the contents of TNSNET.ORA and eliminate errors. Regenerate TNSNET.ORA using the Oracle Network Manager.

- TNS-00126 Missing Connection Manager name and address in TNSNET.ORA**
- Cause** The Interchange name specified in INTCHG.ORA is not defined in the TNSNET.ORA file.
- Action** Define one Connection Manager name and set of addresses for each Interchange in the network. Regenerate the SQL*Net configuration files using the configuration tool.
-
- TNS-00127 Missing Connection Manager name in TNSNET.ORA**
- Cause** One or more Connection Manager names are missing from TNSNET.ORA.
- Action** Ensure that each Connection Manager name is defined in TNSNET.ORA. Regenerate TNSNET.ORA using the Oracle Network Manager.
-
- TNS-00128 Missing COMMUNITY in TNSNET.ORA**
- Cause** One or more ADDRESSes do not have a COMMUNITY assigned.
- Action** Ensure that all addresses have a COMMUNITY defined in TNSNET.ORA.
-
- TNS-00129 Internal error – Failed to create new community**
- Cause** Internal Error. Should not normally occur. There may be a resource limitation problem on the machine.
- Action** Stop and restart Interchange. If possible, make more memory available on the machine. If problem persists, contact Worldwide Customer Support.
-
- TNS-00130 Failed to create Interchange's internal address**
- Cause** There is an error in one of the addresses listed in TNSNET.ORA.
- Action** Check the file for errors in defining Interchanges.
-
- TNS-00131 Missing COMMUNITY in COMMUNITY_COST_LIST in TNSNET.ORA**
- Cause** A COMMUNITY keyword-value pair is missing within the COMMUNITY_COST_LIST in TNSNET.ORA.
- Action** Define the communities with a COMMUNITY name and associated COST in COMMUNITY_COST_LIST.
-
- TNS-00132 COST value must be an integer greater than 0**
- Cause** A community has been defined in TNSNET.ORA with a COST of 0.
- Action** Assign an alternate value that is greater than 0.

TNS-00133	Missing LOCAL_COMMUNITIES field in TNSNAV.ORA
Cause	Improperly configured TNSNAV.ORA file.
Action	Define the LOCAL_COMMUNITIES fields correctly in TNSNAV.ORA.
TNS-00135	Missing TNS error message file
Cause	No error message file is present.
Action	Ensure that the ORACLE environment is correctly set for your platform and that there is a message directory that contains the correct error message file.
TNS-00136	Did not register product/facility for TNS error message
Cause	Error message file error.
Action	Ensure that the ORACLE environment is correctly set for your platform and that there is a message directory that contains the correct error message file.
TNS-00137	Failed to get TNS error message file entry
Cause	No TNS error message file present.
Action	Ensure that the ORACLE environment is correctly set for your platform and that there is a message directory that contains the correct error message file.
TNS-00138	Failed to find ORACLE executable directory
Cause	The ORACLE environment is not correctly set.
Action	Ensure that the ORACLE environment is correctly set and the error messages file is in the correct place.
TNS-00139	Internal – Data passed from the Interchange listener is poorly formed
Cause	Internal error in Interchange.
Action	Check that you are using compatible components of the Interchange product, using the INTCTL VERSION command. If the problem persists, call Worldwide Customer Support.
TNS-00140	Interchange specified was not found in network tables
Cause	Could not find the Interchange specified in a control request.
Action	Check that the Interchange specified is in TNSNET.ORA.

TNS-00141	Failed to get file stream information
Cause	Error in the file stream package.
Action	None.
TNS-00144	PUMP_CONNECTIONS value in INTCHG.ORA is too large
Cause	The number of PUMP_CONNECTIONS specified in INTCHG.ORA is too large to be supported on this platform.
Action	Consult the Oracle operating system specific manual for the value for the number of PUMP_CONNECTIONS.
TNS-00145	PUMPS value in INTCHG.ORA is too large
Cause	The number of PUMPS specified in INTCHG.ORA is too large to be supported on this platform.
Action	Consult the Oracle operating system specific manual for the value for the number of PUMP_CONNECTIONS.
TNS-00146	Internal-- Retry data request within pump
Cause	The data space provided in order to receive data from the pump is too small.
Action	Operation must be retried with a larger buffer.
TNS-00147	Failed to start a pre-spawned pump
Cause	The Connection Manager was unable to start a pump during startup.
Action	Check all configuration parameters and assure that they are correct. Turn on tracing to determine the area that the failure occurred in.
TNS-00200	Unable to do nsanswer on context: result=<i>string</i>
Cause	Requester of service may have aborted or options negotiation failed.
Action	Try making the connection again. If the problem persists call Worldwide Customer Support.
TNS-00201	Unable to read answer connection data: <i>string</i>
Cause	Improperly formed connect data sent to the Interchange listener.
Action	If problem persists, check the application using the Interchange (it may be closing down or crashing). Call Worldwide Customer Support.

TNS-00202	Failure in redirecting call: Original to <i>string</i> Redirect to <i>string</i>
Cause	Internal error: could not redirect call to a pump or other Interchange listener. The cause may be insufficient network or machine resources.
Action	Add resources or close some running applications in order to free up resources. If error persists, call Worldwide Customer Support.
TNS-00203	Unable to start tracing in intlsnr
Cause	Failure in setting up tracing for Interchange listener.
Action	Check file permissions in Network trace directory. Also check to make sure that if trace file names and directories are specified in INTCHG.ORA, they are correct.
TNS-00224	No more connections available
Cause	More connections were attempted to the Interchange than are configured in INTCHG.ORA.
Action	Wait until the Interchange is not as busy or change the number of connections allowed in INTCHG.ORA and restart the Interchange.
TNS-00225	Unable to bequeath connection to pump
Cause	Unable to start a pump because either the executable cannot be found or too many processes are currently running on a particular machine.
Action	Reduce the number of processes on the machine or increase the resources on the machine.
TNS-00226	Unable to contact pump <i>num</i> to send broadcast message <i>string</i>
Cause	Could not call a particular pump.
Action	None, but if the problem persists, call Worldwide Customer Support.
TNS-00227	Unable to contact pump; Connection Manager declared pump dead
Cause	A pump became an orphaned process. A protocol adapter is not working properly or machine network resources are being overused.
Action	This error is not immediately fatal; the orphaned pump may continue to function. Restart the Interchange when convenient. If the problem persists, call Worldwide Customer Support.

TNS-00228	Failure in finding pump data
Cause	Internal problem with data passed back from pump
Action	None.
TNS-00229	Error in nscall: unable to deliver message: <i>string</i>: <i>error num</i>
Cause	Destination for call is unavailable.
Action	None.
TNS-00230	Cannot start new pump process: <i>error string</i>
Cause	Unable to create a new process; possibly there are too many processes on the machine.
Action	Free machine resources by exiting other applications on the Interchange machine. If the problem continues you may need more memory on the machine. If you believe there are sufficient resources on the machine but the problem persists, contact Worldwide Customer Support.
TNS-00232	Unable to set up connection
Cause	Error log message sent from pump to indicate failure in initiating connection because of errors in the call string: network problem or resource limitations.
Action	None.
TNS-00233	Interchange failed to make contact with destination with errors: <i>string</i>
Cause	Pump call to destination failed.
Action	Check destination.
TNS-0235	Aborting connection: Protocol Adapter errors:<i>error error</i>
Cause	Pump aborting connection because connection has been up too long, or there is some other network error on the connection.
Action	None.
TNS-00236	Failed to initialize tracing
Cause	Pump failed to initialize tracing.
Action	Check that INTCHG.ORA is properly configured.

TNS-00237	Failed to refuse connection
Cause	Connection may have aborted before error took place in pump.
Action	None.
TNS-00245	Connection Manager: Failed to open log file
Cause	Message sent back to control program from Interchange.
Action	None.
TNS-00246	Connection Manager: Failed to start tracing
Cause	Message sent back to control program from Interchange.
Action	None.
TNS-00247	Unable to allocate memory for configuration data from TNSNET.ORA file
Cause	Navigator failed to allocate enough memory for TNSNET.ORA configuration file.
Action	Increase machine resources available for running the Interchange or remove some other running applications from the machine.
TNS-00248	Unable to get information from file: <i>string</i>. Exiting with NR error: <i>string</i>
Cause	TNSNAV.ORA is poorly configured or addresses provided are already being used by another application.
Action	Check the syntax of the TNSNAV.ORA file; if necessary, assign new addresses.
TNS-00249	Unable to read network configuration data from file: <i>string</i> NR error: <i>string</i>
Cause	Network configuration file TNSNET.ORA is missing or poorly configured.
Action	Check to make sure that TNSNET.ORA is properly configured.
TNS-00251	Failure in nstest
Cause	NS test operation failed due to internal error.
Action	If the problem persists there may be a network problem or resource limitations on the machine. If these do not seem to be causing the problem, call Worldwide Customer Support.

TNS-00252	Unable to handle route request
Cause	Command requested did not exist.
Action	None.
TNS-00253	Error in reading network configuration data from file <i>string</i> NR error <i>string</i>
Cause	TNSNET.ORA is poorly configured or nonexistent.
Action	Check to make sure that TNSNET.ORA is properly configured.
TNS-00305	The Navigator encountered an invalid/unknown trace level
Cause	Message sent back by the Navigator indicating an invalid trace level.
Action	Reattempt the request with a correct trace level.
TNS-00306	Connection Manager encountered an invalid/ unknown trace level
Cause	Message sent back by the Connection Manager indicating an invalid trace level.
Action	Reattempt the request with a correct trace level.
TNS-00308	Navigator: Failed to open log while rereading parameter data
Cause	Request sent by the Navigator to control program indicating that it could not reopen log file after rereading parameter data.
Action	None.
TNS-00309	Connection Manager: Failed to open log while rereading parameter data
Cause	Request sent by the Connection Manager to control program indicating that it could not reopen log file after rereading parameter data.
Action	None.
TNS-00310	Navigator: Failed to start tracing after rereading parameter data
Cause	Message sent back to control program from Navigator.
Action	None.
TNS-00311	Connection Manager: Failed to start tracing after rereading parameter data
Cause	Message sent back to control program from Connection Manager.
Action	None.

TNS-00312 Connection Manager: Failed to get version information

Cause Message sent back to control program from Connection Manager.

Action None.

TNS-00313 Navigator: Failed to get version information

Cause Message sent back to control program from Navigator.

Action None.

TNS-00315 Failed to allocate larger connect data area for getting pump data:

Cause Could not allocate a large enough area to get pump statistics; continue without them.

Action None

TNS-00316 Ran out of data buffers in the pump

Cause The Interchange is resource limited by having too few data buffers in the pump.

Action If the problem persists (that is, if there are a lot of log messages), increase the number of pump buffers by increasing the value of the parameter PUMP_BUFFERS in INTCHG.ORA. Then shutdown and restart the Interchange to make the changes take effect.

TNS-00317 Failed to contact Connectio Manager

Cause Connection Manager is not running.

Action Start the Connection Manager and retry.

NT Error Messages (TNS-00501 to 00999)

TNS-00501 Cannot allocate memory

Cause Sufficient memory could not be allocated to perform the desired activity.

Action Either free some resource for TNS or add more memory to the machine. For further details, turn on tracing and reexecute the operation.

TNS-00502	Invalid argument
Cause	An internal function received an invalid parameter.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00503	Illegal ADDRESS parameters
Cause	An illegal set of protocol adapter parameters was specified.
Action	Check the parameters within the ADDRESS section of the TNSNAMES.ORA file. It may be helpful to turn on tracing and look at the addresses specified in the trace file, checking for spelling or other errors. Be sure to turn tracing off when the trace is complete.
TNS-00504	Operation not supported
Cause	An internal function received a request to perform an operation that is not supported (on this machine).
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00505	Operation timed out
Cause	The requested operation could not be completed within the timeout period.
Action	For further details, turn on tracing and reexecute the operation.
TNS-00506	Operation would block
Cause	An internal operation did not commence because to do so would block the current process and the user has requested that operations be non-blocking.
Action	None needed; this is an information message.
TNS-00507	Connection closed
Cause	Normal "end of file" condition has been reached; partner has disconnected.
Action	None needed; this is an information message.

TNS-00508 No such protocol adapter

Cause The protocol adapter requested for this connection does not exist.

Action Install the protocol adapter or use one that is available. Be sure that the correct protocols are listed in the configuration files.

TNS-00509 Buffer overflow

Cause Too much data for buffer.

Action Reexecute with larger receive buffer or smaller send buffer.

TNS-00510 Internal limit restriction exceeded

Cause Too many files or sockets open simultaneously (or some other resource has been depleted).

Action For further details, trace the operation for protocol details.

TNS-00511 No listener

Cause The connection request could not be completed because no application is listening on the address specified, or the application is unable to service the connect request in a sufficiently timely manner.

Action Ensure that the supplied destination address matches one of the addresses used by the listener — compare the TNSNAMES.ORA entry with the appropriate LISTENER.ORA file (or TNSNAV.ORA if the connection is to go by way of an Interchange). Start the listener on the remote machine.

TNS-00512 Address already in use

Cause Specified listener address is already being used.

Action Start your listener with an unused address.

TNS-00513 Destination host unreachable

Cause Contact cannot be made with remote party.

Action Make sure the network driver is functioning and the network is up.

TNS-00514	Contexts have different wait/test functions
Cause	Two protocol adapters have conflicting wait/test functions.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00515	Name lookup failure
Cause	A protocol specific ADDRESS parameter cannot be resolved.
Action	Ensure the ADDRESS parameters have been entered correctly; the most likely incorrect parameter is the node name.
TNS-00516	Permission denied
Cause	User has insufficient privileges to perform the requested operation.
Action	Acquire necessary privileges and try again.
TNS-00517	Lost contact
Cause	Partner has unexpectedly gone away.
Action	Investigate partner application for abnormal termination.
TNS-00518	Incomplete read or write
Cause	A data send or receive failed.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00519	Operating system resource quota exceeded
Cause	The current user has exceeded the allotted resource assigned in the operating system.
Action	Acquire more operating system resource, or perform a different function.
TNS-00520	Syntax error
Cause	The supplied connect descriptor contains illegal syntax.
Action	Check the syntax of the connect descriptor for correct syntax.

TNS-00521	Missing keyword
Cause	The supplied connect descriptor is missing one or more TNS keywords.
Action	Check the syntax, and ensure all required keywords are present.
TNS-00522	Operation was interrupted
Cause	An internal operation was interrupted and could not complete.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00523	Previous operation was busy
Cause	Operation tried could not be successfully completed because the requested resource was busy.
Action	Attempt the operation again. If the error persists, contact Worldwide Customer Support.
TNS-00524	Current operation is still in progress
Cause	Internal operation is still in progress but will complete.
Action	None; wait for operation to complete.
TNS-00525	Insufficient privilege for operation
Cause	Operating system failed to complete operation because user lacked sufficient privileges.
Action	Check your platform-specific privileges.
TNS-00526	No caller (false async event)
Cause	Internal error.
Action	For further details, turn on tracing and reexecute the operation.
TNS-00527	Protocol Adapter not loadable
Cause	On some platforms (for example OS/2) protocol adapters are loaded at run-time. If the shared library (or DLL) for the protocol adapter is missing or one of its supporting libraries is missing, then this error is returned.
Action	For further details, turn on tracing and reexecute the operation. The trace file will have the name of the shared library (or DLL) that could not be loaded.

TNS-00528	Protocol Adapter not loaded
Cause	On some platforms (for example OS/2) protocol adapters are loaded at run-time. If the shared library (or DLL) for the protocol adapter has not been loaded, then this error is returned.
Action	For further details, turn on tracing and reexecute the operation. The trace file will have the name of the shared library (or DLL) that has not been loaded.
TNS-00530	Protocol adapter error
Cause	A generic protocol adapter error occurred.
Action	For further details, turn on tracing and reexecute the operation.
TNS-00532	No previous async operation to wait on
Cause	Internal protocol adapter error.
Action	For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00533	Connection dissolved or not yet made
Cause	Internal protocol adapter error.
Action	For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00534	Failed to grant connection ownership to child
Cause	Internal protocol adapter error.
Action	For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00535	Failed to send or receive disconnect message
Cause	Internal protocol adapter error.
Action	For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
TNS-00536	Connection entered inappropriate state
Cause	Internal protocol adapter error.
Action	For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-00537 Index into protocol adapter table is out of legal range

Cause Internal protocol adapter error.

Action For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-00539 Network or protocol services are down

Cause The network services on or from your node are not running or have stopped running.

Action Restart your network and protocol services on this platform. If error persists, contact Worldwide Customer Support.

Listener Error Messages (TNS-01100 to 02500)

TNS-01100 TNS returned error *num* when attempting to start the listener

Cause The bequeath (BEQ) mechanism that LSNRCTL uses to start the listener failed.

Action Check to ensure that the BEQ driver is installed – if it is not then the nserror code returned will be 12538 (NSENODRIVER). To fix this, reinstall SQL*Net V2 and make sure that the BEQ driver is selected when it is installed. If this is not the problem then the error is probably caused by the fact that the TNSLSNR executable cannot be found in the place expected in your platform's ORACLE environment. Verify that the full pathname of the TNSLSNR executable as displayed by LSNRCTL is correct.

TNS-01101 Could not find service name *string*

Cause The service name could not be resolved by name-lookup.

Action Verify that the listener name or service name specified to LSNRCTL has the correct name and address defined in LISTENER.ORA or in TNSNAMES.ORA.

TNS-01102 TNS application contacted was not the listener

Cause Another TNS application such as the Interchange was listening at the address contacted. There may be another TNS application listening at the address contacted and the data returned is not in the appropriate format.

Action Verify that the listener name or service name specified to LSNRCTL has the correct name and address defined in LISTENER.ORA or in TNSNAMES.ORA.

- TNS-01103 Protocol specific component of the address is incorrectly specified**
- Cause** The ADDRESS used to contact the listener is not correctly specified. This error occurs because the address fails to specify the destination of the listener. The address is well-formed (for example, there are no missing parentheses) but it is missing a protocol specific component. For example, this is the error returned when the HOST component is missing from a TCP/IP address string.
- Action** Edit the ADDRESS in LISTENER.ORA to include the required protocol-specific keywords. For more information about the keywords required by different protocol adapters, see the Oracle operating system specific documentation for your platform.
- TNS-01106 Listener using listener_name *listener_name* has already been started**
- Cause** Another listener is already listening on one of the ADDRESSES specified.
- Action** Shutdown the previous listener specified by the *listener_name* before starting this one.
- TNS-01107 A valid trace level was not specified**
- Cause** Failed to specify a valid trace level for the LSNRCTL trace command.
- Action** Specify one of OFF, USER, or ADMIN. Type "lsnrctl help trace" for more information or consult Chapter 2 of this manual for an introduction to the concepts of tracing.
- TNS-01108 Listener password prompt failed**
- Cause** Password not entered via tty.
- Action** Enter the listener password on a tty device.
- TNS-01109 Listener password encryption failed**
- Cause** Possibly garbled password entered.
- Action** Re-enter the listener password, using valid ASCII characters. If problem persists, contact Worldwide Customer Support.
- TNS-01150 The address of the specified listener name is incorrect**
- Cause** The address on which the listener attempted to listen contains a syntax error.
- Action** For the listener name or service name specified to LSNRCTL, check that the address or connect descriptor is well-formed. You can find the listener name in LISTENER.ORA, or you can access the listener through the service name in TNSNAMES.ORA.

TNS-01151 Missing listener name *listener_name* in LISTENER.ORA

Cause The listener could not find the listener name specified.

Action Make sure that valid addresses on which to listen are specified for the listener name in LISTENER.ORA.

TNS-01152 All addresses specified for the listener name *listener_name* failed

Cause The listener failed to listen on any of the specified addresses.

Action Make sure that another application is not listening on the addresses specified or check that the appropriate protocol adapters are installed. Turn on tracing and execute again for more information.

TNS-01154 SID detected in old format that is no longer supported

Cause One of the SIDs was specified in an obsolete format.

Action Check LISTENER.ORA for a line of the form:

sid = (SID=(ORACLE_HOME=*oracle_home*))

or

sid = (SID_DESC=(ORACLE_HOME=*oracle_home*))

The above format is no longer supported and the *SID_LIST_listener_name* format described in the *SQL*Net Administrator's Guide* should be used. For example,

SID_LIST_LISTENER = (SID_LIST=
 (SID_DESC=(SID_NAME=*sid*)(ORACLE_HOME=*oracle_home*)))

TNS-01155 Incorrectly specified *SID_LIST_listener_name* parameter in LISTENER.ORA

Cause *SID_LIST_listener_name* in LISTENER.ORA contains an error.

Action Be sure this parameter is specified as described in the *SQL*Net Administrator's Guide*. For example, (SID_LIST_LISTENER = (SID_DESC=(SID_NAME=*sid*)(ORACLE_HOME=*oracle_home*))).

TNS-01156 Missing or inappropriate PROTOCOL, TIMEOUT, or POOL_SIZE parameter from PRESPAWN_DESC

Cause PRESPAWN_DESC in each SID_DESC does not have required fields.

Action Be sure the parameters required for PRESPAWN_DESC are specified in each SID_DESC. For example:

```
SID_LIST_LISTENER = (SID_LIST= (SID_NAME=sid) (PRESPAWN_MAX=5)
                    (ORACLE_HOME=oracle_home)
                    (PRESPAWN_DESC=(PROTOCOL=tcp)(POOL_SIZE=10)(TIMEOUT=30)))
```

TNS-01157 Can only listen on *num* addresses – ignoring remaining addresses

Cause Too many addresses were given to listen on.

Action Reduce the number of addresses to listen on and use another listener to listen on the remaining addresses.

TNS-01158 Internal connection limit has been reached, preventing dispatcher from connecting

Cause The internal SQL*Net connection list is full. Too many dispatchers are connected to the listener; therefore, no more dispatchers are allowed to connect.

Action For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-01159 Internal connection limit has been reached; listener has shut down

Cause The internal SQL*Net connection list is full. The listener is configured to use too many SQL*Net connections.

Action Reduce the number of listen addresses or services connected to the listener. For further details, turn on tracing and reexecute to operation. If error persists, contact Worldwide Customer Support.

TNS-01167 The command *string* is not supported by the listener contacted

Cause The listener does not recognize the command.

Action This is caused when a newer version of LSNRCTL contacts an old listener. Upgrade listener if executing this command is important.

TNS-01168 Cannot allocate memory

Cause Sufficient memory could not be allocated to perform the desired activity.

Action Either free some resource for TNS, or add more memory to the machine. For further details, turn on tracing and reexecute the operation.

TNS-01169 The listener did not recognize the password

Cause The security feature of the listener is preventing the intended operation.

Action Some commands like stopping the listener are only intended to be used by DBAs. A client can only use LSNRCTL to get the status of a listener and the version of the listener software running. The command that the client attempted may not have been appropriate. If a DBA is attempting the command then use the "set password" command at the LSNRCTL prompt to one of the appropriate passwords in the `PASSWORDS_listener_name` entry in `LISTENER.ORA`. If you do not know a password then you are trying to execute an inappropriate command.

TNS-01170 Event detection broke for address: *address*

Cause The event detection mechanism for the address specified returned an error.

Action Future attempts to detect events on this address will fail. The listener will deallocate the listen address and connections will no longer be accepted for this address. This error is not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-01171 Event detection broke for dispatcher: *dispatcher*

Cause The event detection mechanism for the dispatcher specified returned an error.

Action Future attempts to detect events on this dispatcher will fail. The listener will deallocate the dispatcher and connections will no longer be redirected to this dispatcher. This error is not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-01172 Listener has shut down since all listen addresses have been deallocated

Cause The event detection mechanism broke and caused all listen addresses to be removed.

Action Error 1170 has occurred and caused all the listen addresses to be deallocated. Since all the listen addresses have been removed, no more connections can be established to this listener so it shuts itself down. This error is not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-01173 Missing or inappropriate PRESPAWN_MAX parameter from SID_DESC

Cause PRESPAWN_MAX in each SID_DESC does not have required fields.

Action Be sure the parameters required for PRESPAWN_DESC are specified in each SID_DESC. For example:

```
SID_LIST_LISTENER = (SID_LIST= (SID_NAME=sid) (PRESPAWN_MAX=15)
                     (ORACLE_HOME=oracle_home)
                     (PRESPAWN_DESC=(PROTOCOL=tcp)(POOL_SIZE=10)(TIMEOUT=30)))
```

TNS-1174 The sum of the POOL_SIZES from each PRESPAWN_DESC is greater than the PRESPAWN_MAX

Cause The minimum value for PRESPAWN_MAX should be the sum of the POOL_SIZES in each SID_DESC. For example:

```
SID_LIST_LISTENER = (SID_LIST= (SID_NAME=sid) (PRESPAWN_MAX=15)
                     (ORACLE_HOME=oracle_home)
                     (PRESPAWN_DESC=(PROTOCOL=tcp)(POOL_SIZE=10)(TIMEOUT=30)
                     (PRESPAWN_DESC=(PROTOCOL=ipc)(POOL_SIZE=5)(TIMEOUT=30))))
```

TNS-01200 The listener must be suid root

Cause The ownership privileges of the TNSLSNR executable are incorrect.

Action Contact your DBA or system administrator to change the ownership of the file to be suid root and restart the listener. This action is necessary because the user that started the process should claim ownership.

Comment: This error is reported only on Trusted Oracle platforms.

TNS-01201 Listener cannot find executable *string* for SID *string*

Cause The executable for the Oracle dedicated server process cannot be found.

Action Check the appropriate SID_DESC in LISTENER.ORA to make sure that the ORACLE_HOME component is pointing to a valid location. If this component is not set, then check the value of the ORACLE_HOME environment variable.

Comment: This error is reported only on UNIX platforms.

TNS-01202 Missing the dba group (*string*) specified by DBA_GROUP in SID_DESC

Cause The dba group specified is missing from /ETC/GROUP.

Action Check the DBA_GROUP parameter in the SID_DESC in LISTENER.ORA and verify it has a valid entry in /ETC/GROUP.

Comment: This error is reported only on UNIX platforms.

TNS-01203 Missing the account *string* specified by DEFAULT_USER_ACCOUNT in SID_DESC

Cause The unprivileged OS account is missing from /ETC/PASSWD.

Action Check the DEFAULT_USER_ACCOUNT parameter in the SID_DESC in LISTENER.ORA and verify it has a valid entry in /ETC/PASSWD. This is the account that the ORACLE shadow process will be started with if the connecting client has database privileges or does not exist on this machine.

Comment: This error is reported only on UNIX platforms.

TNS-01204 Unprivileged account *string* is in dba group *string*

Cause The unprivileged account has DBA privileges. The unprivileged account specified by DEFAULT_USER_ACCOUNT in the SID_DESC in LISTENER.ORA is a member of the dba group specified by DBA_GROUP in the SID_DESC. The unprivileged account cannot belong to the dba group because this would be a security violation with OPSS logins.

Action Remove the unprivileged account from the dba group.

Comment: This error is reported only on UNIX platforms.

NA Internal Messages (TNS-02501 to 03500)

TNS-02501 Authentication: no more roles

Cause When a process attempted to retrieve a role from the authentication service, no more were available.

Action None. This error is used internally and occurs in the normal course of events.

TNS-02502 Authentication: unable to find initialization function

Cause The native authentication service was unable to call the initialization function for the specified service because it does not exist.

Action If this service adaptor came directly from Oracle, contact Worldwide Customer Support, as this error should never happen. Otherwise, add an initialization function for the service being used.

TNS-02503 Parameter retrieval failed

Cause The native service layer was unable to retrieve a parameter from a configuration file.

Action If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.

TNS-02504 Parameter count retrieval failed

Cause The native service layer was unable to determine the number of arguments given for a configuration parameter.

Action If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.

TNS-02505 Authentication: null context pointer provided

Cause `nau_ini()` was passed a null pointer for the context that it is supposed to use.

Action Call `nau_ini()` with a pointer to a context structure.

TNS-02506 Authentication: no type string

Cause An authentication context structure does not contain a string that describes the authentication service being used.

Action Contact Worldwide Customer Support

TNS-02507 Encryption: algorithm not installed

Cause After picking an algorithm, the server was unable to find an index for it in its table of algorithms. This should be impossible because the algorithm was chosen (indirectly) from that list.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-0208 Encryption: server negotiation response in error

Cause The server's response in negotiation was in error.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

TNS-02509 Authentication: invalid process state

Cause The state in which a process is running does not correspond to any of the values which are valid.

Action If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.

TNS-02510 Invalid numeric data type

Cause The type of a piece of numeric data that was received does not correspond to one of the valid values.

Action If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.

TNS-02511 Invalid data type

Cause The type of a piece of data that was received or to be transmitted did not correspond to any of the correct values.

Action If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.

TNS-02512 Invalid status received

Cause A process received a value as a status flag which was unknown.

Action If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.

- TNS-02513 Requested data type does not match retrieved type**
- Cause** A service requested data whose type does not match that of the segment which was sent from the other process.
- Action** If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.
-
- TNS-02514 Invalid packet received**
- Cause** A process received a data packet which was not meant for the native services layer.
- Action** If it is possible, enable tracing and attempt to reproduce the problem. In any event, contact Worldwide Customer Support.
-
- TNS-02515 Encryption/crypto-checksumming: unknown control type**
- Cause** An encryption or crypto-checksumming algorithm "control" function was called, but did not recognize the "type" argument it was given.
- Action** Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
-
- TNS-02516 No data available**
- Cause** A native service attempt to retrieve data but no data was available to be received.
- Action** The error is not normally visible as it usually is only used to signal the end of a data stream. If the error becomes visible, enable tracing to reproduce the problem and contact Worldwide Customer Support.
-
- TNS-02517 Key smaller than requested size**
- Cause** The key returned by SNS key negotiation was smaller than the size requested by some service (either encryption or crypto-check-summing).
- Action** The error is not normally visible. If the error persists, enable tracing, reproduce the problem, and contact Worldwide Customer Support.
-
- TNS-02518 key negotiation error**
- Cause** An error occurred while the two sides of the connection were negotiating an SNS key.
- Action** he error is not normally visible. If the error persists, enable tracing to reproduce the problem and contact Worldwide Customer Support.

TNS-02519	no appropriate key-negotiation parameters
Cause	No appropriate key-negotiation parameters are available for the key size requested either by encryption or by crypto-checksumming.
Action	The error is not normally visible. Enable tracing to reproduce the problem and contact Worldwide Customer Support.
TNS-02520	encryption/crypto-checksumming: no Diffie-Hellman seed
Cause	The "sqlnet.crypto_seed" parameter is missing from the SQLNET.ORA parameters file for SQL*Net.
Action	Add this line to SQLNET.ORA, perhaps by using Network Manager: sqlnet.crypto_seed = "randomly-chosen text"
TNS-02521	encryption/crypto-checksumming: Diffie-Hellman seed too small
Cause	The "sqlnet.crypto_seed" parameter in the SQLNET.ORA parameter file for SQL*Net is too small.
Action	Add more randomly-chosen text to it, perhaps using Network Manager.
TNS-02524	Authentication: privilege check failed
Cause	An error occurred when the SQL*Net authentication service attempted to verify that a user had a specific database privilege.
Action	This error should not happen normally. Enable tracing and attempt to repeat the error. Contact Customer Support.
TNS-02525	encryption/crypto-checksumming: self test failed
Cause	The SNS system detected an error while running tests on the active encryption or checksumming algorithm.
Action	Contact Customer Support.
TNS-02526	server proxy type does not match client type
Cause	The authentication type selected by the server does not match that picked by the client.
Action	Contact Worldwide Customer Support

- TNS-03502 Insufficient arguments. Usage: tnsping <address> [<count>]**
- Cause** Some required command-line arguments are missing.
- Action** Re-enter the command using the correct arguments.
-
- TNS-03503 Could not initialize NL**
- Cause** The network library could not be initialized.
- Action** This is an internal error which should not normally be visible. Ensure that memory is available to run the application and that there are no other operating system problems, and then attempt the command again.
-
- TNS-03504 Service name too long**
- Cause** The service name you are attempting to ping is too long.
- Action** Re-enter the command using the correct service name.
-
- TNS-03505 Failed to resolve name**
- Cause** The service name you provided could not be found in TNSNAMES.ORA, an Oracle Names server, or a native naming service.
- Action** Verify that you entered the service name correctly. You may need to ensure that the name was entered correctly into the network configuration using Oracle Network Manager.
-
- TNS-03506 Failed to create address binding**
- Cause** The TNSPING utility found the requested address or service name, but received an internal error when trying to use it.
- Action** This is an internal error which should not normally be visible. Ensure that memory is available to run the application and that there are no other operating system problems, and then attempt the command again.
-
- TNS-03507 Failure looking for ADDRESS keyword**
- Cause** The TNS address did not contain an ADDRESS keyword.
- Action** If you entered the TNS address on the command line, be sure that the syntax is correct. If you entered a service name on the command line, the address contains the wrong information. You should verify that the information was entered correctly with Oracle Network Manager.

TNS-03508 Failed to create address string

Cause The TNSPING utility received an internal error when generating an address.

Action This is an internal error which should not normally be visible. Ensure that memory is available to run the application and that there are no other operating system problems, and then attempt the command again.

TNS-03509 OK (*decimal* msec)

Cause The operation succeeded, in this amount of time.

Action No action necessary.

OSN Error Messages (ORA-12150 to 12195)

ORA-12150 TNS:Unable to send data

Cause Unable to send data. Connection probably disconnected.

Action Re-establish connection. If the error is persistent, turn on tracing and reexecute the operation.

ORA-12151 TNS:Received bad packet type from network layer

Cause Internal error.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12152 TNS:Unable to send break message

Cause Unable to send break message. Connection probably disconnected.

Action Re-establish connection. If the error is persistent, turn on tracing and reexecute the operation.

ORA-12153 TNS:Not connected

Cause Not currently connected to a remote host.

Action Re-establish connection.

ORA-12154 TNS:Could not resolve service name

Cause The service name specified is not defined in the TNSNAMES.ORA file.

Action Make the following checks and correct the error:

- Verify that a TNSNAMES.ORA file exists and is in the proper place and accessible. See the operating system specific manual for details on the required name and location.
- Check to see that the service name exists in one of the TNSNAMES.ORA files and add it if necessary.
- Make sure there are no syntax errors anywhere in the file. Particularly look for unmatched parentheses or stray characters. Any error in a TNSNAMES.ORA file makes it unusable. See Chapter 4 in the *SQL*Net Administrator's Guide*. If possible regenerate the configuration files using the Oracle Network Manager.

ORA-12155 TNS:Received bad datatype in NSWMARKER packet

Cause Internal error during break handling.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12156 TNS:Tried to reset line from incorrect state

Cause Internal error during break handling.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12157 TNS:Internal network communication error

Cause Internal error during network communication.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12158 TNS:Could not initialize parameter subsystem

Cause Unable to locate parameter file.

Action Verify that a valid parameter file exists, and is readable.

ORA-12159 TNS:trace file not writeable

Cause The trace file to be generated is not writeable by this user.

Action If the user does not have write permissions in the directory to which the trace file will be written, contact the DBA to get the proper permissions or use TRACE_DIRECTORY_CLIENT in SQLNET.ORA to specify a directory the user can write to.

ORA-12160 TNS:Internal error: Bad error number

Cause Corrupt error reporting subsystem.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12161 TNS:Internal error: partial data received

Cause The connection may be terminated.

Action Reconnect and try again. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12162 TNS:service name is incorrectly specified

Cause The connect descriptor corresponding to the service name in TNSNAMES.ORA is incorrectly specified.

Action Make sure there are no syntax errors in the connect descriptor. Particularly look for unmatched parentheses or stray characters. Any error in the TNSNAMES.ORA file makes it unusable. See the *SQLNet V2 Administrator's Guide*.

ORA-12163 TNS:Connect descriptor is too long.

Cause The connect descriptor corresponding to the service name in TNSNAMES.ORA is too long.

Action The maximum length for a connect descriptor is 512 bytes and this limit has been exceeded. Use a smaller connect descriptor. If this is not possible, contact Worldwide Customer Support.

NR Error Messages (ORA-12196 to 12285)

ORA-12196 TNS:received an error from TNS

Cause The navigation layer received an error from TNS.

Action See the error log file for the specific TNS error.

ORA-12197 TNS:keyword-value resolution error

Cause The navigation layer received an error while trying to look up a value for a keyword.

Action Check the syntax of the connect descriptor.

ORA-12198 TNS:could not find path to destination

Cause Could not navigate a path through Interchanges to the destination. This error occurs if an invalid community is in the address string, or the address includes a protocol that is not available the TNSNAV.ORA file does not have a correct CMANAGER address specified, or the Interchange is down.

Action Assure that the Interchanges necessary to get to the desired destination are up and have available capacity for an additional connection. Also check that the correct community and protocol have been specified in the CMANAGER address used.

ORA-12200 TNS:Could not allocate memory

Cause Out of memory on machine.

Action Reconfigure machine to have more storage or run fewer applications while the Interchange is running.

ORA-12201 TNS:Encountered too small a connection buffer

Cause TNS connection buffer supplied by the application was too small to retrieve the data sent back.

Action Supply a larger connection buffer. If problem persists, call Worldwide Customer Support.

ORA-12202 TNS:Internal navigation error

Cause Internal navigation error.

Action Not normally visible to the user. For further details contact Worldwide Customer Support.

ORA-12203 TNS:Unable to connect to destination

Cause Invalid TNS address supplied or destination is not listening. This error can also occur because of underlying network transport problems.

Action Verify that the service name you entered on the command line was correct. Ensure that the listener is running at the remote node and that the ADDRESS parameters specified in TNSNAMES.ORA are correct. Finally, check that all Interchanges needed to make the connection are up and running.

ORA-12204 TNS:Received data refused from an application

Cause The application using the Interchange refused the connection at the listener.

Action Make sure that the listener at the destination is functioning correctly. If it is and the problem persists, contact Worldwide Customer Support.

ORA-12205 TNS:Could not get failed addresses

Cause Internal navigation error.

Action Not normally visible to the user. For further details contact Worldwide Customer Support.

ORA-12206 TNS:Received a TNS error during navigation

Cause Internal navigation error occurred because of an unexpected TNS error.

Action Look at the log file to find the TNS error. If necessary, turn on tracing and repeat the operation.

ORA-12207 TNS:Unable to perform navigation

Cause Improperly configured navigation file TNSNAV.ORA.

Action Check the syntax of the TNSNAV.ORA file on the application's machine, and verify that it lists the correct communities.

ORA-12208 TNS:could not find the TNSNAV.ORA file

Cause Either the ORACLE environment is not set up correctly, or the TNSNAV.ORA file is not present.

Action Ensure that the ORACLE environment is set up appropriately on your platform and that a TNSNAV.ORA file is present.

- ORA-12209 TNS:encountered uninitialized global**
- Cause** Application calling navigation routine has not properly configured the global variables. There are no TNSNAV.ORA files available, or they are defective.
- Action** Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
-
- ORA-12210 TNS:error in finding Navigator data**
- Cause** Application calling navigation routine has not properly configured the TNSNAV.ORA file.
- Action** Check the syntax of the TNSNAV.ORA.
-
- ORA-12211 TNS:needs PREFERRED_CMANGERS entry in TNSNAV.ORA**
- Cause** TNSNAV.ORA does not have a PREFERRED_CMANGERS defined.
- Action** Add a PREFERRED_CMANGERS entry to the TNSNAV.ORA file.
-
- ORA-12212 TNS:incomplete PREFERRED_CMANGERS binding in TNSNAV.ORA**
- Cause** The PREFERRED_CMANGERS binding in the client's TNSNAV.ORA file does not have a CMANGER_NAME specified.
- Action** Define the CMANGER_NAME as part of the PREFERRED_CMANGERS binding. Use of the Oracle Network Manager should eliminate this error.
-
- ORA-12213 TNS:incomplete PREFERRED_CMANGERS binding in TNSNAV.ORA**
- Cause** The PREFERRED_CMANGERS binding in the client's TNSNAV.ORA file does not have an ADDRESS specified.
- Action** Define the ADDRESS as part of the PREFERRED_CMANGERS binding.
-
- ORA-12214 TNS:missing LOCAL_COMMUNITIES entry in TNSNAV.ORA**
- Cause** There is no LOCAL_COMMUNITIES entry in TNSNAV.ORA.
- Action** Define the LOCAL_COMMUNITIES for this node in the TNSNAV.ORA file.

ORA-12216 TNS:poorly formed PREFERRED_CMANGERS Addresses in TNSNAV.ORA

Cause Address binding for the PREFERRED_CMANGERS entry in the client's TNSNAV.ORA file is improperly entered.

Action Define the ADDRESS as part of the PREFERRED_CMANGERS binding.

ORA-12217 TNS:could not contact PREFERRED_CMANGERS in TNSNAV.ORA

Cause There is a syntax error in the PREFERRED_CMANGERS entry, or addresses specified are wrong, or the intended Connection Managers are unavailable.

Action Check the PREFERRED_CMANGERS entries in the client's TNSNAV.ORA file and correct them or talk with your network administrator to determine if the specified Connection Managers are available. Verify that the Interchanges are active by using the INTCTL STATUS command.

ORA-12218 TNS:unacceptable network configuration data

Cause Poorly formed network configuration data. For example, a PREFERRED_CMANGERS entry may have an incorrect CMANGER_NAME in the client's TNSNAV.ORA file. Or an Interchange downtime parameter (TIMEOUT_INTERVAL) on the Navigator may be set to zero in INTCHG.ORA.

Action Check the entries in TNSNAV.ORA and the Interchange configuration files and correct them. If necessary, talk to your network administrator to determine if the specified Interchanges (Connection Managers) are available and properly configured. Use the Oracle Network Manager to generate the configuration files if necessary.

ORA-12219 TNS:missing community name from address in ADDRESS_LIST

Cause This error occurs when an ADDRESS_LIST has some ADDRESSES in it that have no COMMUNITY component and others that do have a COMMUNITY component.

Action Check that in the connect descriptors you are using either all the ADDRESSES have a COMMUNITY component or all do not.

ORA-12221 TNS:illegal ADDRESS parameters

Cause An illegal set of protocol adapter parameters was specified. In some cases, this error is returned when a connection cannot be made to the protocol transport.

Action Verify that the destination can be reached using the specified protocol. Check the parameters within the ADDRESS section of TNSNAMES.ORA. Legal ADDRESS parameter formats may be found in the Oracle operating system specific documentation for your platform. Protocols that resolve names at the transport layer (such as DECnet object names) are vulnerable to this error if not properly configured or names are misspelled.

ORA-12222 TNS:no such protocol adapter

Cause The protocol adapter requested (by way of the "(PROTOCOL=...)" keyword-value pair in a TNS address) is unknown. If the supplied address is typographically correct then the protocol adaptor is not installed.

Action Install the protocol adapter or correct typographical error, as appropriate. Note: if the supplied address was derived from resolving the service name, check the address in the appropriate file (TNSNAMES.ORA, LISTENER.ORA or TNSNET.ORA).

ORA-12223 TNS:internal limit restriction exceeded

Cause Too many TNS connections open simultaneously.

Action Wait for connections to close and re-try.

ORA-12224 TNS:no listener

Cause The connection request could not be completed because the listener is not running.

Action Ensure that the supplied destination address matches one of the addresses used by the listener – compare the TNSNAMES.ORA entry with the appropriate LISTENER.ORA file (or TNSNAV.ORA if the connection is to go by way of an Interchange). Start the listener on the remote machine.

ORA-12225 TNS:destination host unreachable

Cause Contact can not be made with remote party.

Action Make sure the network driver is functioning and the network is up.

ORA-12226	TNS:operating system resource quota exceeded
Cause	The current user has exceeded the allotted resource assigned in the operating system.
Action	Acquire more operating system resource, or perform a different function.
ORA-12227	TNS:syntax error
Cause	The supplied connect descriptor contains illegal syntax.
Action	Check the syntax of the connect descriptor in TNSNAMES.ORA.
ORA-12228	TNS:protocol adapter not loadable
Cause	On some platforms (such as OS/2) protocol adapters are loaded at run-time. If the shared library (or DLL) for the protocol adapter is missing or one of its supporting libraries is missing then this error is returned.
Action	For further details, turn on tracing and reexecute the operation The trace file will include the name of the shared library (or DLL) that could not be loaded.
ORA-12229	TNS:Interchange has no more free connections
Cause	One or more Interchanges along the path to the destination desired has no more free connections available to be used for this call.
Action	Try again later when the Interchanges are less busy, or contact your network administrator to have him determine which interchange it is, and increase the number of connections available on that interchange.
ORA-12230	TNS:Severe Network error ocurred in making this connection
Cause	This error is reported by an interchange which fails to make contact with the destination due to a physical network error while calling a destination.
Action	Try again later when the network service may have been fixed or report the problem to your Network Administrator so that he may fix the problem.
ORA-12231	TNS:No connection possible to destination
Cause	This error is reported by an interchange which fails to find a possible connection along the path to the destination.
Action	Report the problem to your Network Administrator so that he may fix the problem.

ORA-12232 TNS:No path available to destination

Cause This error is reported by an interchange which fails to find a possible path to the destination.

Action Report the problem to your Network Administrator so that he may fix the problem.

ORA-12233 TNS:Failure to accept a connection

Cause This error is reported by an interchange which fails to accept a connection due to a redirect failure.

Action Report the problem to your Network Administrator so that he may isolate the interchange problem.

ORA-12234 TNS:Redirect to destination

Cause This error is reported by an interchange which determines that this interchange is not the right gateway and needs to redirect the connection to another gateway along the path to the destination.

Action None.

ORA-12235 TNS:Failure to redirect to destination

Cause This error is reported by an interchange which fails to redirect a connection to another interchange along the path to the destination.

Action Report the problem to your Network Administrator so that he may fix the problem.

ORA-12236 TNS:protocol adapter not loaded

Cause On some platforms (such as OS/2) protocol adapters are loaded at run-time. If the shared library (or DLL) for the protocol adapter has not been loaded, then this error is returned.

Action For further details, turn on tracing and reexecute the operation. The trace file will have the name of the shared library (or DLL) that has not been loaded.

TNS Listener Error Messages (ORA-12500 to 12530)

ORA-12500	TNS:listener failed to start a dedicated server process
Cause	The process of starting up a dedicated server process failed. The executable could not be found or the environment may be set up incorrectly.
Action	Turn on tracing at the ADMIN level and reexecute the operation. Verify that the ORACLE Server executable is present and has execute permissions enabled. Ensure that the ORACLE environment is specified correctly in LISTENER.ORA. If error persists, contact Worldwide Customer Support.
ORA-12502	TNS:listener received no CONNECT_DATA from client
Cause	No CONNECT_DATA was passed to the listener.
Action	Check that the service name resolved from TNSNAMES.ORA has the CONNECT_DATA component of the connect descriptor.
ORA-12504	TNS:listener was not given the SID in CONNECT_DATA
Cause	The SID was missing from the CONNECT_DATA.
Action	Check that the connect descriptor corresponding to the service name in TNSNAMES.ORA has an SID component in the CONNECT_DATA.
ORA-12505	TNS:Listener could not resolve SID given in connect descriptor
Cause	The SID in the CONNECT_DATA was not found in the listener's tables.
Action	Check to make sure that the SID specified is correct. The SIDs that are supported can be obtained by typing <code>LSNRCTL STATUS SERVICE_NAME</code> and matching the SID specified in TNSNAMES.ORA with one of the SIDs displayed in the services summary.
ORA-12509	TNS:listener failed to redirect client to service handler
Cause	The dispatcher terminated unexpectedly.
Action	Attempt to connect again and if the same error occurs, contact the DBA to check the state of the dispatchers for this SID. If the problem persists, turn on tracing in the listener to determine the TNS error caused by the redirect.
ORA-12510	TNS:database lacks resources to handle the request for this SID
Cause	The dispatchers are busy handling other requests.
Action	Contact the DBA to increase the number of dispatchers servicing this SID.

- ORA-12511 TNS:service handler found but it is not accepting connections**
- Cause** The dispatchers are busy handling other requests and they notified the listener that they were temporarily busy.
- Action** Attempt the connection again. If the error persists, ask the DBA to increase the number of dispatchers.
-
- ORA-12512 TNS:service handler found but it has not registered a redirect address**
- Cause** The dispatcher just came up and has not had time yet to register the address that a client should be redirected to.
- Action** Attempt the connection again. If the error persists, ask the DBA to increase the number of dispatchers.
-
- ORA-12513 TNS:service handler found but it has registered on a different protocol**
- Cause** The dispatchers registered for this service are connected to the listener by way of a different network protocol than that of the client.
- Action** Contact the DBA to register a dispatcher on your protocol.
-

NS Error Messages (ORA-12531 to 12629)

- ORA-12531 TNS:cannot allocate memory**
- Cause** Sufficient memory could not be allocated to perform the desired activity.
- Action** Either free some resource for TNS, or add more memory to the machine. For further details, turn on tracing and reexecute the operation.
-
- ORA-12532 TNS:invalid argument**
- Cause** An internal function received an invalid parameter.
- Action** Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12533 TNS:illegal ADDRESS parameters

- Cause** An illegal set of protocol adapter parameters was specified. In some cases, this error is returned when a connection cannot be made to the protocol transport. Check the protocol parameters and verify that the destination can be reached using the specified protocol.
- Action** Check the parameters within the ADDRESS section of TNSNAMES.ORA. Legal ADDRESS parameter formats may be found in the Oracle operating system specific documentation for your platform. Protocols that resolve names at the transport layer (such as DECnet object names) are vulnerable to this error if not properly configured or names are misspelled.

ORA-12534 TNS:operation not supported

- Cause** An internal function received a request to perform an operation that is not supported (on this machine).
- Action** Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12535 TNS:operation timed out

- Cause** The requested operation could not be completed within the timeout period specified by the CONNECT_TIMEOUT parameter in LISTENER.ORA. This error arises from the tnslnsr.
- Action** Either reconfigure CONNECT_TIMEOUT to be 0, which means wait indefinitely, or reconfigure CONNECT_TIMEOUT to be some higher value. Or, if the timeout is unacceptably long, turn on tracing for further information.

ORA-12536 TNS:operation would block

- Cause** An internal operation did not commence because to do so would block the current process and the user has requested that operations be non-blocking.
- Action** None needed; this is an information message.

ORA-12537 TNS:onnection closed

- Cause** Normal "end of file" condition has been reached; partner has disconnected.
- Action** None needed; this is an information message.

ORA-12538 TNS:no such protocol adapter

Cause The protocol adapter requested (by way of the "(PROTOCOL=)" keyword-value pair in a TNS address is unknown. If the supplied address is typographically correct then the protocol adapter is not installed.

Action Install the protocol adapter or correct the typographical error, as appropriate. Note: if the supplied address was derived from resolving the service name resolution, check the address in the appropriate file (TNSNAMES.ORA, LISTENER.ORA, or TNSNET.ORA).

ORA-12539 TNS:buffer over- or under- flow

Cause Buffer too small for incoming data or too large for outgoing data.

Action This restriction (which is associated with CONNECT DATA) is not normally visible to the user. For further details, turn on tracing and reexecute the operation; contact Worldwide Customer Support.

ORA-12540 TNS:internal limit restriction exceeded

Cause Too many TNS connections open simultaneously.

Action Wait for connections to close and re-try.

ORA-12541 TNS:no listener

Cause The connection request could not be completed because the listener is not running.

Action Ensure that the supplied destination address matches one of the addresses used by the listener -- compare the TNSNAMES.ORA entry with the appropriate LISTENER.ORA file (or TNSNAV.ORA if the connection is to go by way of an Interchange). Start the listener on the remote machine.

ORA-12542 TNS:address already in use

Cause Specified listener address is already being used.

Action Start your listener with a unique address.

ORA-12543 TNS:destination host unreachable

Cause Contact cannot be made with remote party.

Action Make sure the network driver is functioning and the network is up.

ORA-12544	TNS:contexts have different wait/test functions
Cause	Two protocol adapters have conflicting wait/test functions.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12545	TNS:name lookup failure
Cause	A protocol specific ADDRESS parameter cannot be resolved.
Action	Ensure the ADDRESS parameters have been entered correctly; the most likely incorrect value is the node name.
ORA-12546	TNS:permission denied
Cause	User has insufficient privileges to perform the requested operation.
Action	Acquire necessary privileges and try again.
ORA-12547	TNS:lost contact
Cause	Partner has unexpectedly gone away, usually during process startup.
Action	Investigate partner application for abnormal termination. On an Interchange, this can happen if the machine is overloaded.
ORA-12548	TNS:incomplete read or write
Cause	A data send or receive failed.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12549	TNS:operating system resource quota exceeded
Cause	The current user has exceeded the allotted resource assigned in the operating system.
Action	Acquire more operating system resource, or perform a different function.
ORA-12550	TNS:syntax error
Cause	The supplied connect descriptor contains illegal syntax.
Action	Check the syntax of the connect descriptor in TNSNAMES.ORA.

ORA-12551	TNS:missing keyword
Cause	The supplied connect descriptor is missing one or more TNS keywords.
Action	Check the syntax, and ensure all required keywords are present.
ORA-12552	TNS:operation was interrupted
Cause	An internal operation was interrupted and could not complete.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12554	TNS:current operation still in progress
Cause	An internal operation is still in progress.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12555	TNS:permission denied
Cause	User has insufficient privileges to perform the requested operation.
Action	Acquire necessary privileges and try again.
ORA-12556	TNS:no caller
Cause	TNS detected an incoming connect request but there was no caller.
Action	Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12557	TNS:protocol adapter not loadable
Cause	On some platforms (such as OS/2) protocol adapters are loaded at run-time. If the shared library (or DLL) for the protocol adapter is missing or one of its supporting libraries is missing then this error is returned.
Action	For further details, turn on tracing and reexecute the operation. The trace file will include the name of the shared library (or DLL) that could not be loaded.

ORA-12558 TNS:protocol adppter not loaded

Cause On some platforms (such as OS/2) protocol adapters ae loaded at run-time. If the shared library (or DLL) for the protocol adapter has not been loaded, then this error is returned.

Action For further details, turn on tracing and reexecute the operation. The trace file will have the name of the shared library (or DLL) that has not been loaded.

ORA-12560 TNS:protocol adapter error

Cause A generic protocol adapter error occurred.

Action Check addresses used for proper protocol specification. Before reporting this error, look at the error stack and check for lower level transport errors. For further details, turn on tracing and reexecute the operation. Turn off tracing when the operation is complete.

ORA-12561 TNS:unknown error

Cause A generic protocol error occurred.

Action For further details, turn on tracing and reexecute the operation.

ORA-12562 TNS:bad global handle

Cause Internal error—bad "gbh" argument passed to TNS from caller. System may have been linked with old libraries.

Action Not normally visible to user. Contact Worldwide Customer Support.

ORA-12564 TNS:connection refused

Cause The connect request was denied by the remote user (or TNS software).

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation.

ORA-12566 TNS:protocol error

Cause An unexpected TNS protocol error has occurred.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12569 TNS:packet checksum failure

Cause The data received is not the same as the data sent.

Action Attempt the transaction again. If the error is persistent, turn on tracing and reexecute the operation.

ORA-12570 TNS:packet reader failure

Cause An error occurred during a data receive.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12571 TNS:packet writer failure

Cause An error occurred during a data send.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12574 TNS:redirection denied

Cause The connect request failed because it would have required redirection and the caller has requested no redirections.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12582 TNS:invalid operation

Cause An internal function received an invalid request.

Action Not normally visible to the user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12583 TNS:no reader

Cause A send operation has been requested but partner has already disconnected.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12585 TNS:data truncation

Cause A receive operation has completed with insufficient data to satisfy the user's request.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12589 TNS:connection not bequeathable

Cause An attempt to hand-off a connection from one process to another has failed because the protocol provider does not support it.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12590 TNS:no I/O buffer

Cause An attempt to perform an I/O operation failed because no buffer was available.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12591 TNS:event signal failure

Cause The TNS software is unable to signal an event occurrence.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12592 TNS:bad packet

Cause An ill-formed packet has been detected by the TNS software.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12593 TNS:no registered connection

Cause An attempt to solicit network event activity has failed because no connections are registered for event notification.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12595	TNS:no confirmation
Cause	TNS is unable to get requested confirmation acknowledgement from remote partner.
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12596	TNS:internal inconsistency
Cause	TNS has detected an internal inconsistency
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12597	TNS:connect descriptor already in use
Cause	Internal error – illegal use of connect descriptor.
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12598	TNS:banner registration failed
Cause	The registration of the product banner with the Oracle server failed.
Action	This is an error which is not normally visible externally. Enable tracing and attempt to repeat the error. If it occurs again, contact Worldwide Customer Support.
ORA-12599	TNS:cryptographic checksum mismatch
Cause	The data received is not the same as the data sent.
Action	Attempt the transaction again. If error persists, check (and correct) the integrity of your physical connection.
ORA-12600	TNS:string open failed
Cause	The creation of the string in ORACLE NLS format failed.
Action	This is an internal error. Enable tracing and attempt to repeat the error. If it occurs again, contact Worldwide Customer Support.

ORA-12601 TNS:information flags check failed

Cause The TNS information flags set by the process prior to connection negotiation were not present after the negotiation was finished.

Action This is an internal error. Enable tracing and attempt to repeat the error. If it occurs again, contact Worldwide Customer Support.

ORA-12611 TNS:operation is not portable

Cause Attempted operation is not portable

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12612 TNS:connection is busy

Cause Attempted operation failed because it conflicts with an on-going action or status of the connection.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12615 TNS:preempt error

Cause A request to service an event failed because no event notification has yet been posted.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12616 TNS:no event signals

Cause The TNS software is unable to enable event signals.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12617 TNS:bad 'what' type

Cause The operation failed because the type of data specified is unknown.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.

ORA-12618	TNS:versions are incompatible
Cause	The two machines are running incompatible versions of TNS.
Action	Check the version numbers, and upgrade the machine with the smaller one.
ORA-12619	TNS:unable to grant requested service
Cause	The connect request failed because requested service could not be provided by the local TNS software.
Action	If appropriate, reexecute with reduced service requirements.
ORA-12620	TNS:requested characteristic not available
Cause	The connect request failed because a requested transport characteristic could not be supported by the remote TNS software.
Action	If appropriate, reexecute with reduced requirements.
ORA-12622	TNS:event notifications are not homogeneous
Cause	An attempt to register a connection for event notification failed because the event notification type conflicts with existing registrations.
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation and contact Worldwide Customer Support.
ORA-12623	TNS:operation is illegal in this state
Cause	Connection is half-duplex and a full-duplex operation was attempted.
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation. If error persists, contact Worldwide Customer Support.
ORA-12624	TNS:connection is already registered
Cause	An attempt to register a connection for event notification failed because the connection is already registered.
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation and contact Worldwide Customer Support.
ORA-12625	TNS:missing argument
Cause	An operation failed because an argument was missing.
Action	Not normally visible to user. For further details, turn on tracing and reexecute the operation and contact Worldwide Customer Support.

ORA-12626 TNS:bad event type

Cause An attempt to register a connection for event notification failed because the event type is unknown.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation and contact Worldwide Customer Support.

ORA-12628 TNS:no event callbacks

Cause An attempt to register a connection for event modification failed because asynchronous callbacks are not available.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation and contact Worldwide Customer Support.

ORA-12629 TNS:no event test

Cause An attempt to register a connection for event notification failed because the ability to test for events is not available.

Action Not normally visible to user. For further details, turn on tracing and reexecute the operation and contact Worldwide Customer Support.

NA Error Messages (ORA-12630 to 12699)

ORA-12630 Native service operation not supported

Cause An operation requested by a user is not supported by the native services component.

Action This may be an internal error if the operation should have been supported.

ORA-12631 Name retrieval failed

Cause The authentication service failed to retrieve the name of a user.

Action Enable tracing to determine which routine is failing.

ORA-12632 Role fetch failed

Cause The authentication service failed to retrieve one of the user's roles.

Action Enable tracing to determine which routine is failing.

ORA-12633 No shared authentication services

Cause The list of authentication services specified by the user does not match those supported by the process.

Action Either specify another list or relink the executable with the desired services.

ORA-12634 Memory allocation failed

Cause Process was unable to allocate memory.

Action Terminate other processes in order to reclaim needed memory.

ORA-12635 No authentication adapters available

Cause The executable was not linked with any authentication service adapters but the sqlnet.ora parameter that determines whether or not authentication is required was set to true.

Action Either disable the parameter or relink the executable with service adapters.

ORA-12636 Packet send failed

Cause A process was unable to send a packet to another process. Possible causes are:

1. The other process was terminated.
2. The machine on which the other process is running went down.
3. Some other communications error occurred.

Action If the cause is not obvious, contact Worldwide Customer Support.

ORA-12637 Packet receive failed

Cause A process was unable to receive a packet from another process. Possible causes are:

1. The other process was terminated.
2. The machine on which the other process is running went down.
3. Some other communications error occurred.

Action If the cause is not obvious, contact Worldwide Customer Support.

ORA-12638 Credential retrieval failed

Cause The authentication service failed to retrieve the credentials of a user.

Action Enable tracing to determine the exact error.

ORA-12639 Authentication service negotiation failed

Cause No match was found between the types of authentication services that the client supports and those that the server is using.

Action Possible solutions:

1. Change the entry in sqlnet.ora that determines which services are to be used.
2. Relink the client with at least one of the authentication service adapters that the server supports.
3. Relink the server with at least one of the authentication service adapters that the client supports.
4. Disable authentication on both the client and server.

ORA-12640 Authentication service initialization failed

Cause The function specified in the authentication table entry for the service failed.

Action Enable tracing to determine the exact error.

ORA-12641 Authentication service failed to initialize

Cause The authentication service failed during initialization.

Action Enable tracing to determine the exact error.

ORA-12642 No session key

Cause A process has no session key associated with it because the authentication service being used does not use one.

Action If a session key is required, use another authentication service.

ORA-12643 Process communication failed

Cause A process was unable to communicate with another process. Possible causes are:

1. The other process was terminated.
2. The machine on which the other process is running went down.
3. Some other communications error occurred.

Action If the cause is not obvious, contact Worldwide Customer Support.

- ORA-12644 Authentication service initialization failed**
- Cause** The routine called to initialize the authentication adapter failed.
- Action** Enable tracing to determine the exact error. A likely cause is that memory is exhausted.
-
- ORA-12645 Parameter does not exist**
- Cause** A sqlnet.ora parameter from which a value was needed does not exist.
- Action** Set the parameter in the parameter file.
-
- ORA-12646 Invalid value specified for boolean parameter**
- Cause** The value specified for a parameter was set to a value other than true/false or on/off.
- Action** Correct the value of the parameter.
-
- ORA-12647 Authentication required**
- Cause** The parameter that controls whether authentication is required was set to true, but the executable does not have an authentication service linked in.
- Action** Either re-link the executable with an authentication service adapter or disable the parameter.
-
- ORA-12648 Encryption or data integrity algorithm list empty**
- Cause** A SQL*Net list-of-algorithms parameter was empty, e.g. "0".
- Action** Change the list to contain the name of at least one installed algorithm, or remove the list entirely if every installed algorithm is acceptable.
-
- ORA-12649 Unknown encryption or data integrity algorithm**
- Cause** A SQL*Net list-of-algorithms parameter included an algorithm name that was not recognized.
- Action** Either remove that algorithm name, correct it if it was misspelled, or install the driver for the missing algorithm.

ORA-12650 No common encryption or data integrity algorithm

Cause The client and server have no algorithm in common for either encryption or data integrity or both.

Action Choose sets of algorithms that overlap. In other words, add one of the client's algorithm choices to the server's list or vice versa.

ORA-12651 Encryption or data integrity algorithm unacceptable

Cause The algorithm the server chose to use for encryption or data integrity was not one of the choices acceptable to the client. This is either the result of an internal error, of a network data transmission error, or of deliberate tampering with the transmitted data.

Action For further details, turn on tracing, re-execute the operation, and contact Worldwide Customer Support.

ORA-12652 String truncated

Cause Not enough memory was allocated for a string so it had to be truncated.

Action If it is OK that the string is truncated, then it is not an error. Otherwise, call the routine that reported the error again with a larger string buffer.

ORA-12653 Authentication control function failed

Cause The control function utilized by the authentication service driver failed.

Action Enable tracing to determine the exact error.

ORA-12654 Authentication conversion failed

Cause The authentication service was unable to convert the credentials of a user from the format specific to the format into the ORACLE format.

Action Enable tracing to determine the exact error.

ORA-12655 Password check failed

Cause The authentication service being used was unable to verify the provided password.

Action Enable tracing to determine the exact error.

ORA-12656 Cryptographic checksum mismatch

Cause The cryptographic checksum received with a packet of incoming data didn't match the checksum computed by the receiving end. This indicates that the packet was tampered with or otherwise corrupted in transit.

Action Look for sources of data corruption, perhaps including deliberate tampering.

ORA-12657 No algorithms installed

Cause The near side of the connection required the use of a service (either encryption or checksumming) when no algorithms for that service were installed.

Action Remove the "ON" requirement for that service.

ORA-12658 Native service required but TNS version is incompatible

Cause A process that is running an earlier version of TNS attempted to connect but the connection failed because the server process required that a native service (authentication, encryption, etc.) be used.

Action Relink the calling executable and retry the connection or eliminate the requirement that the service be used on the server side.

ORA-12659 Error received from other process

Cause An error was received by one or more services from the process on the other side of the connection.

Action Enable tracing to determine the exact error(s). The error(s) is (are) not returned directly because an error generated by a server may not make sense on the client side and vice-versa.

ORA-12660 SNSparameters incompatible

Cause One side of the connection specified "REQUIRED" for encryption or crypto-checksumming, while the other side specified "REJECTED".

Action Change the "REQUIRED" side to "REQUESTED" if you want encryption or crypto-checksumming to be optional, or change the "REJECTED" side to "ACCEPTED" if you do not want the service to be optional.

ORA-12661 Protocol authentication to be used

Cause The SQL*Net authentication service has determined that the SQL*Net transport protocol in use is to be utilized to authenticate a user's identity.

Action This error is used solely to communicate information between the authentication service and the SQL*Net session layer and should not be visible to the user. If the error is seen, contact Worldwide Customer Support.

ORA-12662 proxy ticket retrieval failed

Cause The authentication adapter used by SQL*Net failed to retrieve the credentials needed to authenticate a database link.

Action Enable tracing to determine the exact error.

ORA-12663 Services required by client not available on the server

Cause Service(s) that was (were) required by the client process were not available on the server process.

Action Configure the server with the services required by the client (best solution) or delete the requirement from the configuration file of the client (least secure).

ORA-12664 Services required by server not available on the client

Cause Service(s) that was (were) required by the server process were not available on the client process.

Action Configure the client with the services required by the server (best solution) or delete the requirement from the configuration file of the server (least secure).

ORA-12665 NLS string open failed

Cause A native service was unable to make a string available for use by the National Language Support component.

Action Make sure the National Language Support component has been properly. If it has, enable tracing and report the problem to Customer Support.

ORA-12666 Dedicated server: outbound transport protocol different from inbound

Cause The protocol specified for an externally-identified outbound connection from a dedicated server (database link) was not the same as that used for the inbound connection. It is not possible for SQL*Net to authenticate a proxy connection that uses a protocol that is different from that which was used for the connection to the dedicated server.

Action Specify the same protocol in the SQL*Net connect string or alias for the outbound connection as that used for the inbound connection.

ORA-12667 Shared server: outbound transport protocol different from inbound

Cause The protocol specified for an externally-identified outbound connection from a shared server (database link) was not the same as as that used for the inbound connection. It is not possible for SQL*Net to authenticate a proxy connection that uses a protocol that is different from that which was used for the connection to the shared server.

Action Specify the same protocol in the SQL*Net connect string or alias for the outbound connection as that used for the inbound connection

ORA-12668 Dedicated server: outbound protocol does not support proxies

Cause The protocol specified to perform an externally-identified proxy connection (database link) from a dedicated server does not support proxy connections.

Action Specify a protocol in the SQL*Net connect string or alias used for the connection that does support externally-authenticated proxy connections.

Note: Because of a limitation in SQL*Net, the protocol used for the proxy connection must the same as that used for the connection from the client to the server.

ORA-12669 Shared server: outbound protocol does not support proxies

Cause The protocol specified to perform an externally-identified proxy connection (database link) from a shared server does not support proxy connections.

Action Specify a protocol in the SQL*Net connect string or alias used for the connection that does support externally-authenticated pro connections.

Note: Because of a limitation in SQL*Net, the protocol used for the proxy connection must the same as that used for the connection from the client to the server.

ORA-12670 Incorrect role password

Cause A password supplied for a role could not be validated by the authentication service.

Action Supply the correct password.

ORA-12671 Shared server: adapter failed to save context

Cause The adapter for the authentication service failed when it tried to save the data needed for proxy connections (database links) through the multi-threaded server.

Action Enable tracing to determine the exact error. Contact Worldwide Customer Support if the reason is not obvious.

ORA-12672 Database logon failure

Cause The authentication service adapter in use encountered an error it attempted to validate the logon attempt of a user.

Action Enable tracing to determine the exact error encountered by the adapter.

ORA-12673 Dedicated server: context not saved

Cause A connection was marked as being a proxy connection (database link) from a dedicated server but no inbound context was present.

Action Before calling nsnnainit(), call the routine that saves the context.

ORA-12674 Shared server: proxy context not saved

Cause A connection was marked as being a proxy connection (database link) from a shared server but no inbound context was present.

Action Before calling nsnnainit(), call the routine that saves the context.

ORA-12675 External user name not available yet

Cause The authentication service in use was not able to return the external name of a user of the ORACLE server because it is not available to the service yet.

Action This is just an information message and should not normally be visible to the user. If the error does appear, contact Worldwide Customer Support.

- ORA-12676 Server received internal error from client**
- Cause** The server process received an error from the client which indicated that an internal SQL*Net native services error had occurred.
- Action** Enable tracing on both processes and attempt to recreate the problem. If the problem recurs, contact Worldwide Customer Support.
- ORA-12677 Authentication service not supported by database link**
- Cause** The authentication service used by the proxy process (database link) was unable to find the adapter being used by the client in its list of authentication mechanisms.
- Action** Specify an authentication adapter that is shared by the client and the server being used for the database link.
- ORA-12678 Authentication disabled but required**
- Cause** The configuration parameters that control whether SQL*Net authentication is disabled or required were both set to TRUE.
- Action** Set one or both of the parameters to FALSE.
- ORA-12679 Native services disabled by other process but required**
- Cause** The remote process has disabled native services but the local process requires them.
- Action** Enable native services on the remote process or disable them locally.
- ORA-12680 Native services disabled but required**
- Cause** The process has disabled native services but at least one service is required.
- Action** Enable native services or change the configuration file so that none of the available services are required.
- ORA-12681 Login failed: the SecurID card does not have a pincode yet**
- Cause** The SecurID card that is used to logon to Oracle, does not have a pincode assigned to it.
- Action** Use one of the programs supplied by Security Dynamics to assign a pincode to the card.

ORA-12682 Login failed: the SecurID card is in next PRN mode

Cause The SecurID card and the SecurID server are out of sync and the server requires the next cardcode to resynchronize the card.

Action Use one of the programs supplied by Security Dynamics to resynchronize the SecurID card.

ORA-12683 Encryption/crypto-checksumming: no Diffie-Hellman seed

Cause The "sqlnet.crypto_seed" parameter is missing from the SQLNET.ORA parameters file for SQL*Net.

Action Add this line to SQLNET.ORA, perhaps by using Network Manager:
sqlnet.crypto_seed = *randomly-chosen text*

ORA-12684 Encryption/crypto-checksumming: Diffie-Hellman seed too small

Cause The "sqlnet.crypto_seed" parameter in the SQLNET.ORA parameter file for SQL*Net is too small.

Action Add more randomly-chosen text to it, perhaps using Network Manager.

ORA-12685 Native service required remotely but disabled locally

Cause A native service is required by the remote process but native services have been disabled locally.

Action Enable native services locally or change the configuration parameters on the remote host so that no native services are required.

ORA-12699 Native service internal error

Cause An internal error occurred in the native services component.

Action Enable tracing to determine the exact error. Contact Worldwide Customer Support.

Network Manager Error Messages

This chapter includes the error messages for the Oracle Network Manager. It contains error messages from three files.

- NMC messages are messages generated by the Oracle Network Manager that appear in response to user input to the tool. Only those messages that notify you of errors which require you to take actions that are not a logical continuation of your use of the tool are included in this chapter.
- NMO messages are messages from the network object layer. These messages appear only when unusual errors at the underlying object layer occur.
- NMR messages are messages from the object storage (ROS file) level of the Network Manager. Most of these are internal errors not normally visible to the user.

NMC Error Messages (NMC-00001 to 11000)

NMC-00005 Failed to save document

Cause A File.Save or File.SaveAs failed. If more information is available, it will appear under this error.

Action Make sure that the file exists and is both readable and writable by the application.

NMC-00010 Resource file cannot be opened

Cause NetMan's resource file was not located or could not be opened.

Action Consult the documentation for your platform to determine the proper location for this file, then be sure it has been installed there.

NMC-00011 Failed to initialize windowing system

Cause Network Manager failed to initialize the windowing system.

Action Make sure the Oracle Toolkit 2 product has been installed properly. If the error persists contact Worldwide Customer Support.

NMC-00012 The connection to the windowing system was refused

Cause Network Manager failed to initialize the windowing system because it was refused a connection to it.

Action Make sure your DISPLAY environment variable is set properly and that you have permission to run on the machine it points to.

NMC-00014 Unable to allocate memory

Cause The application has run out of memory

Action Add more memory or run fewer processes.

NMC-00015 Fatal error in property sheet; suggest you save immediately

Cause Cause: An error was raised while processing a property sheet. If more information is available, it will appear under this error.

Action Perform File.Save or File.SaveAs immediately, then exit the program.

NMC-00016	Unable to find prototype file <i>file</i>
Cause	Net Manager's prototype file was not located or could not be opened.
Action	Consult the documentation for your platform to determine the proper location for this file, then be sure it has been installed there.
NMC-00028	Resource file is invalid; version <i>version</i> is required
Cause	The resource file found was not the current version.
Action	Consult the documentation for your platform to determine the proper location for this file, then be sure the correct version has been installed there.
NMC-00031	Unable to locate online help file
Cause	The nmc help file was not found.
Action	Consult the documentation for your platform to determine the proper location for this file, then be sure the correct version has been installed there.
NMC-00032	Not enough memory to write to clipboard
Cause	On a Cut or Copy operation, there was insufficient memory.
Action	Add more memory or run fewer processes.
NMC-00033	Clipboard is empty
Cause	On a Paste, there was nothing on the clipboard.
Action	none
NMC-03750	Cannot export Oracle Names data
Cause	Export to Names has failed. This error is followed by detailed error information, if any.
Action	Restart Net Manager, after checking that the database schema is properly installed, and the database is online.
NMC-03751	ROS table <i>tablename</i> has not been installed
Cause	The application attempted to load a document and could not find a required system table inside that document. If the document is stored in a database, this error can also occur when the document database has not yet been installed.
Action	If the document is stored on a database, make sure the database schema has been properly installed, using the nmcbild.sql installation script.

NMC-03752	Illegal Region delegation configuration
Cause	The relationship among your regions is unacceptable.
Action	Contact Worldwide Customer Support for further information.
NMC-03901	Could not access directory <i>directory_name</i>
Cause	Directory could not be accessed. If more information is available, it will appear under this error.
Action	Make sure that directory exists and is writable.
NMC-03902	Error while writing file <i>filename</i>
Cause	Error while writing to the file. If more information is available, it will appear under this error.
Action	Make sure that the file can be created and written to in the appropriate export directory.
NMC-03903	Error while removing directory <i>directory_name</i>
Cause	A old export directory could not be removed. If more information is available, it will appear under this error.
Action	Make sure that directory exists and is removable.
NMC-03904	Error while creating directory <i>directory_name</i>
Cause	An export directory could not be created. If more information is available, it will appear under this error.
Action	Make sure that the directory is able to be created where specified.
NMC-03905	Error while spawning a new process
Cause	fork() failed while removing a previous export directory. If more information is available, it will appear under this error.
Action	Free memory to allow fork() to succeed. Alternatively, clear space for the export directory manually.

NMC-03906	Error while removing a directory
Cause	execl("/bin/rm",...) failed. If more information is available, it will appear under this error.
Action	Follow OS-dependent procedures to allow execl("/bin/rm",...) to succeed. Alternatively, clear space for the export directory manually.
NMC-03907	Node <i>node_name</i> not found
Cause	Node not found in exported network or not fully-qualified.
Action	Supply a correct and fully domain-qualified Node name.
NMC-03908	Client Profile <i>profile</i> not found
Cause	Client Profile not found in exported network or not fully-qualified.
Action	Supply a correct and fully domain-qualified Client Profile name.
NMC-03910	Database <i>database</i> is not defined in this network
Cause	The network being exported is stored on a database not defined within it; as a result, names.ora cannot be correctly exported.
Action	Store the network definition on a database defined within the network before exporting.
NMC-03952	Could not open V1 connect-string file <i>filename</i>
Cause	File could not be opened. If more information is available, it will appear under this error.
Action	Make sure the file exists and is readable.
NMC-03953	File <i>filename</i> is not correctly formatted
Cause	At least one line from the file is not correctly formatted for V1 import.
Action	Make sure that the file is, in fact, a V1 connect string file; if so, make sure that all lines are in correct import format ("<alias> = <V1-connect-string>" or "<alias> <V1-connect-string>"), are blank, or are commented (begin with a '#').
NMC-03954	File <i>filename</i> includes no valid V1 connect-strings
Cause	File is empty (or, perhaps, has only blank and commented lines).
Action	Import a file with some valid connect-strings.

NMC-03976	A value must be supplied for parameter <i>parameter</i>
Cause	A necessary parameter was not supplied to the program, either at the command line or at the parameter window.
Action	Supply a value for the parameter.
NMC-03978	Could not find current directory
Cause	Could not get name of current working directory. If more information is available, it will appear under this error.
Action	
NMC-03979	Could not open <i>filename</i> for output
Cause	Couldn't open file for writing. If more information is available, it will appear under this error.
Action	Make sure that the file is in a directory that exists and is writable.
NMC-03980	Error writing to <i>filename</i>
Cause	Couldn't write to the file. If more information is available, it will appear under this error.
Action	Make sure that the file exists and is writable.
NMC-03981	Only one of <i>node</i> and <i>client_profile</i> can be specified
Cause	Both <i>node</i> and <i>client_profile</i> are specified as parameters to netfetch.
Action	Supply a value for only one of these parameters.
NMC-03982	Network <i>network_name</i> is invalid and cannot be exported
Cause	Specified network is invalid and cannot be exported.
Action	Open network with Net Manager and correct the invalid objects.
NMC-04000	A value for CONNECT must be supplied
Cause	The database connect information has not been supplied.
Action	Restart the program with the parameter in the form username/password@connect

NMC-04001	A value for DEST_DIR must be supplied
Cause	The destination directory has not been supplied.
Action	Restart the program with the destination directory parameter.
NMC-04002	A value for NETWORK must be supplied
Cause	The network name has not been supplied.
Action	Restart the program with the network name.
NMC-04500	Network conversion has failed
Cause	A problem was found during conversion; see the rest of the message for more details.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10002	failed to start event loop
Cause	The user interface was unable to start up.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10003	failed to shutdown event loop
Cause	The user interface was unable to shut down properly.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10006	failed to destroy all windows
Cause	The user interface was unable to shut down properly.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10007 failed to quit the window system

Cause The user interface was unable to shut down properly.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10012 failed to create the application context

Cause The user interface was unable to start up.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10013 failed to shutdown the application

Cause The user interface was unable to shutdown properly.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10017 unable to process the dependencies for this change

Cause During computation of the results of a user change, the program exceeded its maximum storage.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10018 unable to record invalid status for object *object*

Cause An object was invalidated, but Net Manager was unable to record its status properly.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10019 error reloading window, arguments [*argument*, *argument*]

Cause A window could not be reloaded from the resource manager.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10020	error loading window, arguments [<i>argument</i>, <i>argument</i>]
Cause	A window could not be reloaded from the resource manager.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10022	error using internal cache, arguments [<i>argument</i>, <i>argument</i>]
Cause	Internal error; tried to reference an entry at first argument; second argument is maximum number.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10023	error rereading class <i>class</i>
Cause	Could not reread a class that is already displayed.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10025	error running status window
Cause	An error was returned from Toolkit for the status window.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10032	create help session error, argument <i>argument</i>
Cause	Help session create routine has returned an error
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10033	show help screen error, argument <i>argument</i>
Cause	Help session show routine has returned an error.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10034	resource file error; can't find node in object <i>object</i>
Cause	Resource file has become corrupted since installation.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support. Then reinstall the resource file.
NMC-10035	resource file error; can't read analysis portion
Cause	Resource file has become corrupted since installation.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support. Then reinstall the resource file.
NMC-10036	resource file's analysis portion has incorrect version: <i>version</i>
Cause	Resource file has become corrupted since installation.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support. Then reinstall the resource file.
NMC-10039	cannot load menu <i>menu</i>
Cause	Unable to locate the specified menu in the resource file.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support. Then reinstall the resource file.
NMC-10044	resource manager returned <i>error_number</i> on startup
Cause	An error occurred on startup of Resource Manager.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10045	failed to load window <i>window</i> from resource file
Cause	Unable to locate the specified window in the resource file.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMC-10046	error starting the windowing system, arguments <i>number</i>
Cause	An error was encountered trying to start the windowing system.
Action	An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
NMC-10047	can't initialize the clipboard
Cause	On startup, the clipboard could not be started.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10048	incomplete data on clipboard
Cause	Clipboard data was corrupted.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10049	failure in writing to clipboard
Cause	Unable to write data to the clipboard.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10050	version mismatch in clipboard formats
Cause	Unable to read data from the clipboard.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMC-10051	unable to load resource <i>resource</i> from resource file
Cause	Unable to load a resource from the resource file.
Action	Not normally visible to the user. Contact Worldwide Customer Support.

NMC-10060	Control of newly created object is not allowed
Cause	User tried to control an invalid object.
Action	Save and validate object.
NMC-10061	Control of invalid object is not allowed.
Cause	User tried to control an invalid object.
Action	Validate object.
NMC-10062	Server Manager is not installed
Cause	Server Manager is not installed on this machine.
Action	Install Server Manager.
NMC-10063	Failed to start Server Manager
Cause	Failed to start Server Manager.
Action	Check permissions on Server Manager executable. If the error persists, contact Worldwide Customer Support.
NMC-10065	Failed to fork new process for Server Mnaager
Cause	Network Manager failed to fork a new process for Server Manager.
Action	Check that thre are enough system resources to allow additional processes to be created.
NMC-10080	Failed to construct the pathname of analysis.ora
Cause	Network Manager failed to create the full pathname of the analysis.ora.
Action	Check to see ORACLR_HOME is set. If the error persists, contact Worldwide Customer Support.
NMC-10081	Failed to open analysis.ora
Cause	Network Manager failed to open analysis.ora.
Action	Check the permissions on the file. Contact Worldwide Customer Support.
NMC-10082	Failed to read the number of classes from analysis.ora
Cause	Network Manager failed to read the number of classes from analysis.ora.
Action	Contact Worldwide Customer Support.

NMC-10082 Failed to read class details from analysis.ora.

Cause Network Manager failed to read the class details from analysis.ora.

Action Contact Worldwide Customer Support.

NMO Error Messages (NMO-01001 to 01300)

NMO-01001 out of memory

Cause The application has run out of memory.

Action Add more memory or run fewer processes.

NMO-01002 ROS table *table* has not been installed or is inaccessible

Cause The application could not find a required ROS table. This error typically occurs when the document database has not yet been installed, or when the user does not have access privileges to the tables in the document database.

Action If the document is stored in a database, make sure the database tables have been properly installed, and access privileges properly granted. If the document is stored in a file, then this error should not occur. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01003 error initializing ROS

Cause The application was unable to initialize ROS during startup. If more information is available, it will appear under this error.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01004 error opening ROS file *filename*

Cause An error occurred while trying to open a document file. The error almost always occurs when the file either does not exist, or cannot be read and written by the application. If more information is available, it will appear under this error.

Action Make sure that file exists and is both readable and writable by the application.

- NMO-01005 error opening ROS database using user ID *userid***
- Cause** An error occurred while trying to connect to a document database. The error can occur when the ROS database tables have not been installed on the database, or if the database is currently unavailable, or if SQL*Net connectivity between the application and the database has been interrupted.
- Action** Make sure that the ROS database tables have been correctly installed on your database, that the database is running and that there is SQL*Net connectivity between the application and the RDBMS.
- NMO-01006 cannot save an unnamed file**
- Cause** The application attempted to save a document with no name.
- Action** An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.
- NMO-01007 lock for document *document* has been stolen by *name***
- Cause** While you were working on a document, someone else requested that your lock on the document be broken and then took over the document. You may no longer save the document under its current name.
- Action** If you want to save the document, you must now do so under a new name.
- NMO-01008 document name length of *length* exceeds maximum of *length***
- Cause** The maximum length of a document name was exceeded.
- Action** Choose a shorter document name and retry the failing operation.
- NMO-01009 document *document* has been locked by user *name***
- Cause** The document has been locked by another user, and may not be edited by anyone else until it has been unlocked.
- Action** An internal error not normally visible to the user. Normally, a locked document is detected by the application, which then asks the user what action to take. Wait until the document is no longer being worked on, and contact Worldwide Customer Support.

NMO-01010	document <i>document</i> already exists
Cause	You attempted to create a new document with the same name as that of an already existing document.
Action	An internal error not normally visible to the user. Normally, an existing document is detected by the application, which then asks the user what action to take. Save the document under another name, and contact Worldwide Customer Support.
NMO-01011	document has been corrupted
Cause	The application detected a corrupted document.
Action	Make sure the document has not been accidentally corrupted. If the document appears correct, the error is internal and you should contact Worldwide Customer Support.
NMO-01012	document <i>document</i> has version <i>version_number</i> but <i>version_number</i> is required
Cause	The document being opened is the wrong version and the application cannot interpret it.
Action	Run the document conversion utility supplied with this product. The utility will upgrade old documents to a version which can be understood by the application.
NMO-01013	document <i>document</i> not found
Cause	An attempt was made to open a nonexistent document.
Action	Use the document list function to get a list of available documents.
NMO-01014	database user ID length of <i>size</i> exceeds maximum of <i>size</i>
Cause	The maximum length of a database user ID was exceeded.
Action	Choose a shorter user ID and retry the failing operation.
NMO-01015	file name length of <i>size</i> exceeds maximum of <i>size</i>
Cause	The maximum length of a file name was exceeded.
Action	Choose a shorter file name and retry the failing operation.

NMO-01016 cannot modify a read-only document

Cause You attempted to modify a document which has been opened for reading only.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NMO-01017 cannot delete or rename the current document

Cause You attempted to delete or rename the document that you are currently working on.

Action Either close the current document, save it under another name, or open a new document and then delete or rename the old document.

NMO-01018 error loading meta data

Cause The application failed to load document meta data while opening a new document. The error can occur if the document being opened has been corrupted in some way, but is usually an internal error.

Action Be sure the document has not been accidentally corrupted. If the document appears correct, the error is internal and you should contact Worldwide Customer Support.

NMO-01019 error locking or unlocking document *document*

Cause The application encountered an error while trying to lock or unlock a document. The error typically occurs when the document database has become unavailable, either because the database has shut down, or because SQL*Net connectivity between the database and the application has been interrupted.

Action The error generally appears above a more specific error which will tell you the exact nature of the problem. Make sure the database is running and that you have SQL*Net connectivity to it.

NMO-01020 ORACLE error *error*

Cause The application encountered an ORACLE error while trying to access the document database. The error typically occurs when the document database has become unavailable, either because the database has shut down, or because SQL*Net connectivity between the database and the application has been interrupted.

Action Make sure the database is running and that you have SQL*Net connectivity to it.

NMO-01021 error initializing document context

Cause The application could not create a new document context.

Action The error appears above a more specific error which will tell you the exact nature of the problem.

NMO-01022 error copying document *document* from *filename* to database

Cause The application encountered an error while trying to copy a document from a file to the document database. The error typically occurs when the document database has become unavailable, either because the database has shut down, or because SQL*Net connectivity between the database and the application has been interrupted.

Action The error generally appears above a more specific error which will tell you the exact nature of the problem. Make sure the database is running and that you have SQL*Net connectivity to it.

NMO-01023 error copying document *document* from database to *filename*

Cause The application encountered an error while trying to copy a document from the document database to a file. The error can occur when the document database has become unavailable, either because the database has shut down, or because SQL*Net connectivity between the database and the application has been interrupted. It can also occur if the file system has run out of space, or the file is not writable by the application.

Action Make sure the database is running and that you have SQL*Net connectivity to it. Also make sure that there is disk space available, and that the application has permission to write the file.

NMO-01024 cannot rename a document onto itself

Cause You attempted to rename a document its current name.

Action You are not allowed to rename a document to its current name. Choose a different name and retry the operation.

NMO-01025 error creating new ROS file *filename*

Cause The application failed to create a new ROS file by copying the current document to the new file. The error can occur if the new file is not writeable by the application, or if the file system runs out of space.

Action Make sure the application has permission to write the new file, and that there is sufficient disk space available.

- NMO-01026 unable to generate temporary ROS file in directory *directory***
- Cause** The application was unable to generate a temporary file name in the specified directory. The error usually occurs either because there are too many old temporary files in the directory, or because the application lacks write permission in the directory, or because the file system is out of space.
- Action** Remove old unused temporary files, make sure the file system has disk space, and that the application has permission to write files in the temporary file directory.
-
- NMO-01027 error from ROS data store**
- Cause** the application encountered an error while accessing the ROS data store. If the current document is stored in a database, the error can occur when the document database has become unavailable, either because the database has shut down, or because SQL*Net connectivity between the database and the application has been interrupted. If the document is stored in a file, the error can occur if the file system has run out of space. The error generally appears above a more specific error which will tell you the exact nature of the problem.
- Action** If your document is stored in a database, make sure the database is running and that you have SQL*Net connectivity to it. If the document is stored in a file, make sure that the application has permission to write the file.
-
- NMO-01028 document *document* is owned by *name***
- Cause** You attempted to create a new document with the same name as a document that is owned by someone else.
- Action** Choose a different name. You may not overwrite someone else's document.
-
- NMO-01029 document conversion failed**
- Cause** Internal error while conversion was taking place.
- Action** Notify customer support and examine displayed error stack.
-
- NMO-01030 must specify both old name and new name**
- Cause** One of the fields (either old name or new name) was empty.
- Action** Specify a name in each of those fields.

NMO-01251 cannot open document, database context not initialized

Cause The application attempted to operate on a document without first connecting to the document database.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01252 invalid class ID *id*

Cause The application detected an invalid object class ID.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01253 invalid attribute ID *id*

Cause The application detected an invalid object attribute ID.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01254 attribute name *name* not found

Cause The application detected an invalid object attribute name.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01255 class ID *id* must be a CONCRETE class

Cause The application detected use of an invalid object class ID.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01256 attribute ID *id* is read-only

Cause The application detected an attempt to modify a read-only class attribute.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

- NMO-01257 type mismatch when setting attribute with ID *id***
- Cause** The application detected an attempt to set an attribute to a val of the wrong type.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NMO-01258 invalid instance ID *id***
- Cause** The application detected an invalid object instance ID.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NMO-01259 instance with ID *id* not found**
- Cause** The application detected an invalid object instance ID.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NMO-01260 current document *document* is not stored in a database**
- Cause** The application attempted to issue an operation restricted to documents stored in a database, and the current document is stored in a file.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NMO-01261 instance ID *id* , attribute *attribute* length of *size* exceeds maximum of *size***
- Cause** An internal size limit was exceeded.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NMO-01262 number of savepoints exceeds maximum of *number***
- Cause** The internal savepoint limit was exceeded.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMO-01263 unable to record invalid status for object *object*

Cause An object was invalidated but Network Manager was unable to record its status properly.

Action An internal error not normally visible to the user. Save the document using the SAVE AS command, and contact Worldwide Customer Support.

NMR Error Messages (NMR-00001 to 00500)

NMR-00001 generic operation failure

Cause A ROS operation failed.

Action The error generally appears below a more general error which will tell you where the problem is occurring. See the action text for that error.

NMR-00100 unexpected end of file

Cause A ROS file operation detected an end-of-file when it was not expecting one, probably because the file has become corrupted.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00101 object not found

Cause A ROS fetch operation failed to find any objects.

Action The error generally appears below a more general error which will tell you where the problem is occurring. See the action text for that error.

NMR-00102 object unexpectedly found

Cause A ROS operation found an object when it was not expecting to.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00103	value too big
Cause	A ROS operation received an incorrect value.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00104	invalid value
Cause	A ROS operation received an invalid value. expecting one, probably because the file has become corrupted.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00105	invalid data store
Cause	A ROS operation detected an invalid data store, probably because the data store has become corrupted.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00106	invalid object type
Cause	A ROS operation received a value with an invalid type.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00107	unexpected NULL value
Cause	A ROS operation received an unexpected empty value.
Action	n internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00108	undefined or invalid table name
Cause	A ROS operation was performed on an invalid table.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00109 invalid argument

Cause A ROS operation received an invalid argument.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00200 ROS file error

Cause A ROS file operation detected an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00201 unique key violation

Cause A ROS file operation detected a unique key constraint violation.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00205 page split occurred

Cause A ROS file operation detected a page split.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00207 cannot close, commit is pending

Cause The ROS user attempted to close a data store with a commit pending.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00210 error creating file

Cause The ROS file store create operation failed.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00211 file version error

Cause ROS detected a file store with an incorrect version.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00212 file already open read-only

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00213 file already open read-write

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00214 file write error

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00215 file read error

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00216 file close error

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00217 file write error, disk is full

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00218 file unique key violation

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00221 file header page size error

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00222 file error, commit is pending

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00223 file byte order conversion error

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00225 file error, translate check byte

Cause A ROS file operation received an error.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMR-00226	file index page is already free
Cause	A ROS file operation received an error.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00230	file state is inconsistent
Cause	A ROS file operation received an error.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00240	file shadow table overflow
Cause	A ROS file operation received an error.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00300	UPI error
Cause	A ROS database operation received an error.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00301	disk space exhausted
Cause	A ROS file operation received an error.
Action	An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NMR-00401	memory allocation failed
Cause	The application has run out of memory.
Action	Add more memory or run fewer processes.

NMR-00402 memory allocation failed

Cause The application has run out of memory.

Action Add more memory or run fewer processes.

NMR-00403 memory free failed

Cause The application's memory heap has become corrupted.

Action An internal error not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

Oracle Names Error Messages

This chapter describes the messages generated by:

- the Oracle Names server
- the Oracle Names client, and those common to both client and server
- the Oracle Names Control Utility
- the Oracle Names server's Network Management Protocol, which is the part of the Names server that handles SNMP queries. Most of these are internal errors not normally visible to the user.
- Oracle Names server Network Presentation Layer. Most of these are internal errors not normally visible to the user.

Oracle Names Server (NNO-00050 to 00711)

NNO-00050 **serious errors in configuration data, server cannot run**

Cause The server's configuration data has a problem of some sort which prevents the server from starting.

Action Previous error messages in the log file will specify the exact problems leading to the shutdown. The problem most frequently occurs when the network is broken up into multiple administrative regions and the delegation points are incorrect. Read the Oracle Names documentation sections on region delegation and ensure that their directions are being followed correctly.

NNO-00051 **domain count *num* exceeds maximum of *num*, first *num* will be loaded**

Cause The server's configuration contains more domains than the server can support.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00052 **invalid domain description list**

Cause The server's configuration contains an invalid domain description list.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00053 **duplicate domain description for domain *domain_name***

Cause The server's configuration contains duplicate domain descriptions in the domain description list.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00054 **invalid domain name *domain_name***

Cause The server's configuration contains a domain description with an invalid name.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

- NNO-00055 invalid domain minimum TTL *num***
- Cause** The server's configuration contains a domain description with an invalid minimum TTL.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00056 warning: domain minimum TTL must be between *num* and *num*, set to *num* seconds**
- Cause** The server's configuration contains a domain description with an invalid minimum TTL. This error is not fatal; the server will automatically set the TTL to a default value which is suitable for most uses.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00058 warning: cannot load topology data from configuration database**
- Cause** An error was encountered while trying to load the server's topology data from the configuration database. If more information is available, it will appear under this error. This error will cause the server to shut down.
- Action** Make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. To force the server to start up anyway, using its checkpoint data, start the server with the `names.no_region_database` parameter set to TRUE. If no checkpoint data is available, the server will shut down.
-
- NNO-00059 cannot construct topology checkpoint file name**
- Cause** The server could not construct a system-dependent file name.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.

NNO-00060 loading server topology from checkpoint file *checkpoint_file*

Cause An informational message written to the log file when the server cannot load from the ROS data store and is instead reading from its most recent topology checkpoint file.

Action While the message is informational in nature, it indicates that the server was unable to contact its ROS data store, which is not normal. If the ROS data store is a file, make sure that file is accessible to the server. The file's name is set in the Oracle Network Manager. If the ROS data store is an RDBMS, make sure that the RDBMS is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the RDBMS.

NNO-00062 cannot load domain data from configuration database

Cause An error was encountered while trying to load the server's domain data from the configuration database. If more information is available, it will appear under this error. This error will cause the server to shut down.

Action Make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. To force the server to start up anyway, using its checkpoint data, start the server with the `names.no_region_database` parameter set to TRUE. If no checkpoint data is available, the server will shut down.

NNO-00063 cannot construct domain checkpoint file name

Cause The server could not construct a system-dependent file name.

Action An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.

NNO-00064 loading domain data from checkpoint file *checkpoint_file*

Cause An informational message written to the log file when the server cannot load from the ROS data store and is instead reading from its most recent domain checkpoint file.

Action While the message is informational in nature, it indicates that the server was unable to contact its ROS data store, which is not normal. If the ROS data store is a file, make sure that file is accessible to the server. The file's name is set in the Oracle Network Manager. If the ROS data store is an RDBMS, make sure that the RDBMS is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the RDBMS.

- NNO-00068 warning: administrative region reload check failed, next check in *num* seconds**
- Cause** This warning is issued whenever the server fails to connect to the ROS data store and see if any configuration data has changed. The server will automatically begin reissuing reload checks more frequently, and will eventually give up if connections fail continuously for three days.
- Action** If the ROS data store is a file, make sure that file is accessible to the server. The file's name is set in the Oracle Network Manager. If the ROS data store is an RDBMS, make sure that the RDBMS is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the RDBMS.
-
- NNO-00069 warning: too many administrative region check failures, checking disabled**
- Cause** A warning issued whenever the server has continuously failed for three days in its attempts to connect to the ROS data store. The server disables reload checking. Reload checking can later be re-enabled from the Oracle Network Manager or the Oracle Names control program.
- Action** If the ROS data store is a file, make sure that file is accessible to the server. The file's name is set in the Oracle Network Manager. If the ROS data store is an RDBMS, make sure that the RDBMS is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the RDBMS.
-
- NNO-00080 domain *domain_name* cannot be delegated because its parent is already delegated**
- Cause** An internal delegation error has occurred. Delegation is controlled by the Oracle Network Manager, which enforces correct delegation rules.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00081 domain *domain_name* has no name servers**
- Cause** An internal configuration error has occurred. The Oracle Network Manager is responsible for configuring Oracle Names servers correctly.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00082	domain <i>name</i> is missing my name <i>name</i> as a name server
Cause	An internal configuration error has occurred. The Oracle Network Manager is responsible for configuring Oracle Names servers correctly.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00083	domain <i>name</i> server <i>name</i> has no addresses
Cause	An internal configuration error has occurred. The Oracle Network Manager is responsible for configuring Oracle Names servers correctly.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00084	domain <i>name</i> is not in the authoritative domain list
Cause	An internal configuration error has occurred. The Oracle Network Manager is responsible for configuring Oracle Names servers correctly.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00104	line <i>num</i> syntax error, data ignored
Cause	The server found a syntax error its domain data. This message will also appear if the server's internal checkpoint files become corrupted. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00105	line <i>num</i> invalid name <i>name</i>, data ignored
Cause	The server found an invalid global name in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00106	line <i>num</i> invalid TTL <i>num</i>, data ignored
Cause	The server found an invalid TTL in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00107	line <i>num</i> ignoring stale checkpoint data
Cause	An informational message which appears during server startup when the server detects out-of-date cached data in its cache checkpoint file. The message is part of normal server startup.
Action	None
NNO-00108	line <i>num</i> TTL of <i>num</i> seconds below domain minimum <i>num</i> using minimum
Cause	The server found an invalid TTL value in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00109	line invalid data type name <i>name</i>, data ignored
Cause	The server found an invalid data type name in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00110	line <i>num</i> unknown data type <i>name</i>, data ignored
Cause	The server found an unknown data type in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00111	line <i>num</i> data type <i>name</i> has syntax <i>name</i>, should be <i>name</i>, data ignored
Cause	The server found an invalid data type syntax in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00112	line <i>num</i> ignored duplicate data of type <i>name</i>
Cause	The server found a duplicate record in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.

- NNO-00113** **line *num* alias data already exists, all other data ignored**
- Cause** The server found a alias and non-alias data with the same global name in its domain data. The record in question is not loaded, but the server continues to load data.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00114** **line *num* other data exists, alias data ignored**
- Cause** The server found a alias and non-alias data with the same global name in its domain data. The record in question is not loaded, but the server continues to load data.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00115** **line *num* single-value data type *name*, other instances ignored**
- Cause** The server found more than one record with the same name and type, when the type allows only a single record with a particular name. The record in question is not loaded, but the server continues to load data.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00116** **line *num* data type *name* not allowed here, data ignored**
- Cause** The server found a record with an invalid data type in its domain data. The record in question is not loaded, but the server continues to load.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00117** **line *num* missing data type, data ignored**
- Cause** The server found a record with a missing data type in its domain data. The record in question is not loaded, but the server continues to load data.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00118	line <i>line_num</i> data length <i>num</i> exceeds maximum of <i>num</i>, data ignored
Cause	The server found a record whose length exceeds an internal limit. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00119	line <i>line_num</i> server not authoritative for name <i>num</i>, data ignored
Cause	The server found a global name in its domain data for which it is not authoritative. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00120	line <i>line_num</i> topology name <i>record_name</i> not allowed here
Cause	The server found an invalid record in its domain data. The record in question is not loaded, but the server continues to load data.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00150	warning: invalid hint list, no hints loaded
Cause	The server's configuration contains an invalid hint description list. The server will continue to run, but will not load any hints.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00151	warning: ignoring hint for domain <i>name</i>, server is authoritative
Cause	The server's configuration contained a hint for a domain in the server's administrative region. The hint is ignored and the server continues to run.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00152	warning: hint count <i>num</i> exceeds maximum of <i>num</i>, first <i>num</i> will be loaded
Cause	There are too many hints in the server's hint list. The server will load a specified maximum number of hints, ignore the rest, and continue running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00153	warning: hint domain <i>name</i> has invalid name <i>name</i>, hint domain ignored
Cause	The server's configuration contains a hint domain with an invalid name. The domain is ignored and the server continues to run.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00154	warning: hint <i>name</i> has invalid server name <i>name</i>, hint ignored
Cause	The server's configuration contains a hint with an invalid server name. The hint is ignored and the server continues to run.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00155	warning: hint <i>name</i> has missing address, hint ignored
Cause	The server's configuration contains a hint with no server address. The hint is ignored and the server continues to run.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00156	warning: hint <i>name</i> address length <i>num</i> exceeds maximum of <i>num</i>, hint ignored
Cause	The server's configuration contains a hint whose address length exceeds an internal limit. The hint is ignored and the server continues to run.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00157	warning: hint <i>name</i> has invalid address, hint ignored
Cause	The server's configuration contains a hint with an invalid address. The hint is ignored and the server continues to run.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00158	warning: hint domain count <i>num</i> exceeds maximum of <i>num</i> first <i>num</i> will be loaded
Cause	The server's hint domain list is too long. The server will load a specified maximum number of hint domains, ignore the rest, and continue running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00159	warning: ignoring duplicate hint domain <i>name name name</i>
Cause	The server's hint domain list contains a duplicate domain. The duplicate is ignored and the server continues running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00160	warning: ignoring duplicate hint server
Cause	The server's hint server list contains a duplicate server. The duplicate is ignored and the server continues running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00250	invalid administrative region description
Cause	The server encountered an invalid administrative region description during startup. This error will prevent the server from starting. The administrative region description is stored in the server's names.ora configuration file.
Action	Make sure that the names.admin_region parameter in names.ora is correct. The names.ora file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.
NNO-00251	missing administrative region parameter <i>name</i>
Cause	The server's administrative region description is missing a required parameter. This error will prevent the server from starting. The administrative region description is stored in the server's names.ora configuration file.
Action	Make sure that the names.admin_region parameter in names.ora is correct. The names.ora file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.
NNO-00252	invalid administrative region parameter <i>name value name</i>
Cause	The server encountered an invalid administrative region parameter. This error will prevent the server from starting. The administrative region description is stored in the server's names.ora configuration file.
Action	Make sure that the names.admin_region parameter in names.ora is correct. The names.ora file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.

NNO-00253 administrative region parameter *name* length *num* exceeds maximum of *name*

Cause The server encountered an administrative region parameter whose length exceeds an internal limit. This error will prevent the server from starting. The administrative region description is stored in the server's `names.ora` configuration file.

Action Make sure that the `names.admin_region` parameter in `names.ora` is correct. The `names.ora` file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.

NNO-00254 warning: parameter *num* value must be between *num* and *num*, set to *num* seconds

Cause The server encountered an administrative region parameter with an invalid value. The value is set to a default suitable for most applications, and the server continues running. The administrative region description is stored in the server's `names.ora` configuration file.

Action Make sure that the `names.admin_region` parameter in `names.ora` is correct. The `names.ora` file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.

NNO-00255 cannot initialize ROS

Cause The server was unable to initialize ROS during startup. The error prevents the server from running.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00257 warning: cannot get serial number from configuration database

Cause The server encountered an error while trying to get the configuration database's serial number. The error occurs almost always because the server configuration has not been exported from the Oracle Network Manager. The error can also occur any time the server is unable to access the configuration database. If the error occurs during server startup, the server will shut down. If the error occurs during server operation (the server checks the serial number periodically to see if it should reload itself), then the server assumes a transient failure has occurred and repeats the operation a short while later. If the repetitions continue to fail for three days, the server will log another error and stop issuing the serial number load operation.

Action First make sure that the Oracle Network Manager has exported a server configuration for this name server. Next, make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. If the error occurs during server startup, you can force startup anyway, with checkpoint data, by starting the server with the names.no_region_database parameter set to TRUE. If no checkpoint data is available, the server will shut down.

NNO-00258 cannot load configuration from configuration database

Cause An error was encountered while trying to load the server's configuration from the configuration database. If more information is available, it will appear under this error. This error will cause the server to shut down.

Action Make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. To force the server to start up anyway, using its checkpoint data, start the server with the names.no_region_database parameter set to TRUE. If no checkpoint data is available, the server will shut down.

NNO-00259 configuration tables have not been installed or are inaccessible

Cause The configuration database has not been properly installed.

Action Make sure the Oracle Network Manager and its database have been properly installed.

- NNO-00260 loading configuration data from checkpoint file *checkpoint_file***
- Cause** An informational message written to the log file when the server cannot load from the ROS data store and is instead reading from its most recent configuration checkpoint file.
- Action** While the message is informational in nature, it indicates that the server was unable to contact its ROS data store, which is not normal. If the ROS data store is a file, make sure that file is accessible to the server. The file's name is set in the Oracle Network Manager. If the ROS data store is an RDBMS, make sure that the RDBMS is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the RDBMS.
-
- NNO-00261 cannot construct configuration checkpoint file name**
- Cause** The server could not construct a system-dependent file name.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.
-
- NNO-00262 warning: cannot write checkpoint file *checkpoint_file***
- Cause** The server was unable to write the named checkpoint file. This problem is typically due to the file system's protection settings. The error is not fatal; it simply means the server will not create any checkpoint data, and that ROS data store access failures during subsequent startups may prevent the server from running, because the server will have no checkpoint data on which to fall back.
- Action** Check to see that the server has permission to write the file named in the error message.
-
- NNO-00263 error from configuration database**
- Cause** The server encountered an error while accessing the configuration database. The error can occur when the database is unavailable, or SQL*Net connectivity to the database is interrupted.
- Action** Make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. To force the server to start up anyway, using its checkpoint data, start the server with the `names.no_region_database` parameter set to TRUE. If no checkpoint data is available, the server will shut down.

NNO-00264	configuration database query returned no data
Cause	The server attempted to fetch data from the configuration database and no data was found.
Action	The error generally appears underneath a more specific error which will tell you the exact nature of the problem.
NNO-00265	warning: cannot load data from checkpoint file
Cause	The server was started using checkpoint data, and was unable to read that data. The remaining errors below this one on the error stack provide more specific information about the problem.
Action	Check to see that the named file exists and that the server has permission to read it.
NNO-00266	cannot find document <i>document</i> in configuration database
Cause	The server encountered an error while trying to get its configuration ID from the configuration database. The error can occur any time the server is unable to access the configuration database. This error will cause the server to shut down.
Action	Make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. To force the server to start up anyway, using its checkpoint data, start the server with the <code>names.no_region_database</code> parameter set to TRUE. If no checkpoint data is available, the server will shut down.
NNO-00267	warning: configuration database contains no data for server <i>server_name</i>
Cause	The server successfully contacted the configuration database, but was unable to find any configuration information associated with the server's name. The name is specified in the server's <code>names.ora</code> configuration file. The error occurs almost always because the server configuration has not been exported from the Oracle Network Manager.
Action	Make sure that the Oracle Network Manager has exported a server configuration for this names server.
NNO-00268	warning: configuration database is not used, using checkpoint data instead
Cause	An informational message indicating that the server has been started with the <code>names.no_region_database</code> parameter set to TRUE, and that it will use checkpoint data rather than attempting to contact the configuration database.
Action	None.

- NNO-00269 configuration database is version *version*, server requires version *version***
- Cause** The server cannot use the specified configuration database because it is of an incorrect version.
- Action** Run the document conversion utility supplied with the Oracle Network Manager and re-export your network. The conversion utility will upgrade old documents to a version which can be understood by the Names server.
-
- NNO-00270 ORACLE error *error***
- Cause** An ORACLE error was encountered while accessing the configuration database. The error can occur when the database is unavailable, or SQL*Net connectivity to the database is interrupted.
- Action** Make sure that the database is running, that its name and password as specified in the Oracle Network Manager are accurate, and that there is SQL*Net connectivity between the Oracle Names server and the database. To force the server to start up anyway, using its checkpoint data, start the server with the `names.no_region_database` parameter set to `TRUE`. If no checkpoint data is available, the server will shut down.
-
- NNO-00300 no listen addresses specified, at least one is required**
- Cause** The server's configuration is missing addresses on which to listen.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00304 listen address *address* length *length* exceeds maximum of *num***
- Cause** The length of one of the server's listen addresses exceeds an internal limit.
- Action** An internal error not normally visible to the user. Contact Worldwide Customer Support.
-
- NNO-00307 invalid server name *server***
- Cause** The server's name is invalid. The name is specified in the server's `names.ora` configuration file.
- Action** Make sure that the `names.server_name` parameter in `names.ora` is correct. The `names.ora` file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.

NNO-00311 invalid listen address list

Cause The server's configuration contains an invalid listen address list.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00312 listen address *address* is invalid

Cause The server's configuration contains an invalid listen address.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00313 server password length *num* exceeds maximum of *num*

Cause The server's password length exceeds an internal limit.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00314 error changing trace level from *num* to *num*, level change ignored

Cause The server encountered an error while changing its trace level in response to a request from the Oracle Names control program.

Action An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.

NNO-00320 missing server name parameter

Cause The server could not find a names.server_name parameter. The name is specified in the server's names.ora configuration file.

Action Make sure that the names.server_name parameter in names.ora is correct. The names.ora file is automatically generated by the Oracle Network Manager, but administrators can edit the file at any time, introducing errors. If the file was never changed, contact Worldwide Customer Support.

NNO-00600 warning: forwarder count *num* exceeds maximum of *num*, first *num* will be loaded

Cause The server's configuration contains too many default forwarders. The server loads a specified maximum number of forwarders, ignores the rest, and continues running.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNO-00601	warning: no forwarders, DEFAULT-FORWARDERS-ONLY mode ignored
Cause	The server's configuration enables DEFAULT-FORWARDERS-ONLY mode but the configuration contains no default forwarders. The server ignores the request and continues running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00602	warning: forwarder <i>name</i> has invalid address, forwarder ignored
Cause	One of the forwarders in the default forwarder list has an invalid address. The forwarder definition is ignored and the server continues running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00608	received corrupted message
Cause	The server received a corrupted request. The request is ignored.
Action	Corrupted requests are usually caused by transient network problems. If many corrupted messages are received, turn on tracing for further information. If the errors persist, contact Worldwide Customer Support.
NNO-00609	warning: forwarder <i>name</i> address length <i>num</i>, exceeds maximum of <i>num</i>, ignored
Cause	The server's configuration contains a forwarder address whose length exceeds an internal limit.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00610	detected possible alias loop involving name <i>name</i>
Cause	The server detected an alias loop involving the specified name. An alias loop occurs when an alias "X" points to another alias "Y", which points back to "X" rather than to an address or other name server data. The loop can contain more hops but the basic idea remains the same. Loops occur when administrators mis-enter network data, particularly when an alias in one administrative region points to data in another administrative region.
Action	Use the Oracle Names control program to query for the specified name. The control program will describe the alias path, and you can use that information to find which names are incorrect and what administrative regions the incorrect data belongs to.

NNO-00632	warning: forwarder <i>name</i> has missing address, forwarder ignored
Cause	The server's configuration contains a forwarder description with a missing address.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00633	detected fatal delegation loop involving server <i>name</i>
Cause	The server detected a fatal delegation loop while forwarding a request. A loop occurs when the server's topology data indicates that it should forward a request to itself. The server immediately shuts down in response to this error.
Action	An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.
NNO-00634	received authoritative name <i>name</i> when we are its authority
Cause	A server "X" received authoritative data from another server "Y" when server "X" is also authoritative for the data. Such situations should never arise because if server "X" is authoritative for the requested data, it should never forward the request to another server.
Action	An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.
NNO-00635	warning: ignoring duplicate forwarder <i>name</i>
Cause	The server's default forwarder list contains a duplicate server. The duplicate is ignored and the server continues running.
Action	An internal error not normally visible to the user. Contact Worldwide Customer Support.
NNO-00700	warning: cannot checkpoint the cache, trying again in <i>num</i> seconds
Cause	The server was unable to perform its normal periodic cache checkpointing, typically because the cache checkpoint file could not be written. The cache checkpoint file name appears as an informational message during server startup.
Action	Check to see that the server has permission to write the cache checkpoint file, and that there is sufficient disk space for the file to be written.

- NNO-00701 warning: cannot construct checkpoint file name, checkpointing disabled**
- Cause** The server could not construct a system-dependent file name.
- Action** An internal error not normally visible to the user. For further details, turn on tracing and restart the server. If the error persists, contact Worldwide Customer Support.
-
- NNO-00705 warning: cannot open checkpoint file name, checkpointing disabled**
- Cause** The server was unable to open the named checkpoint file for writing. This problem is typically due to the file system's protection settings. The error is not fatal; it simply means the server will not checkpoint its cache.
- Action** Check to see that the server has permission to write the file named in the error message.
-
- NNO-00709 failed delete of cache checkpoint file *checkpoint_file*, cache flush may not work**
- Cause** The server attempted to flush its cache, which also deletes the cache checkpoint file. The file deletion failed, although the rest of the cache flush succeeded. Succeeding errors describe the reason for the deletion failure.
- Action** This error typically occurs when two cache-flush operations are issued in succession without an intervening cache checkpoint operation (which would recreate the file). The first deletes the cache file, the second attempts to do so, but fails since the file has already been deleted. In such cases, the message is harmless and can be ignored. If, however, the error occurs because the server lacks permission to delete the file, then you must change the file system permissions so the server is allowed to delete the file.

Oracle Names Client and Client/Server (NNC-00001 to 00501)

- NNC-00001 maximum number of connections already open**
- Cause** All available name service connections are handling requests.
- Action** If the problem occurs when running a name server, increase the values of `names.max_open_connections`. If the problem occurs in a client program, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
- NNC-00002 error listening on stream *num***
- Cause** The name server was asked to listen on the specified address, and failed, probably because the address is malformed, or because it uses a SQL*Net protocol adaptor which has not been installed.
- Action** Make sure the address is properly formed, and that it uses a protocol adaptor which has been installed on your system.
- NNC-00003 error opening stream *num***
- Cause** A name server or client program attempted to open a connection to another server and failed, either because the server is down, or because the network path to that server is not working. This error is usually displayed underneath an error which describes the problem in more detail.
- Action** Make sure that the server being connected to is listening on the address used, and that there is network connectivity between the two end-points.
- NNC-00004 connection is broken**
- Cause** The connection from a name server or client program to another server has been broken, either because that server has shut down, or because the network path to the server has stopped working. This error is usually displayed underneath an error which describes the problem in more detail.
- Action** Make sure that the server being connected to is running and listening on the address used, and that there is network connectivity between the two end-points.
- NNC-00005 cannot initialization stream subsystem**
- Cause** The name service stream subsystem could not be started, probably because of a missing TNS error message file.
- Action** Check that SQL*Net has been installed properly and that all message files are in their proper locations.

NNC-00050 message format error

Cause A corrupted name server message was received by a name server or the name server program interface.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00051 message content error

Cause A corrupted name server message was received by a name server or the name server program interface.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00052 client and server protocol versions are incompatible

Cause A name server message with an incompatible protocol version was received by a name server or the name server program interface. This problem will occur when there are clients and servers with widely varying protocol versions that are trying to communicate.

Action Upgrade older client and server software so it is compatible with newer software.

NNC-00053 ASN.1 error encountered while sending or receiving message

Cause The name server or the name server program interface attempted to send or receive a message and failed because of an ASN.1 error.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00400 memory exhausted

Cause The program interface has run out of memory.

Action Add more memory or run fewer processes.

NNC-00401 program interface initialization failed

Cause The name server program interface could not be initialised, probably because of a missing TNS or name server error message file.

Action Check that SQL*Net has been installed properly and that all message files are in their proper locations.

NNC-00402 program interface de-initialization failed

Cause An internal error occurred while the name server program interface was being de-initialised by an internal function.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00403 program interface has not been initialised

Cause Cause: An internal function has attempted to de-initialise the name service program interface when it has not yet been initialised.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00404 supplied buffer of size *num* is smaller than minimum size *num*

Cause A caller supplied the name server program interface with a memory buffer too small for the interface's requirements. This error is usually displayed underneath an error which describes the problem in more detail.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00405 network failure

Cause The network connection between the client program and the name server has failed, either because the server has shut down, or because the network path to the server has stopped working. This error is usually displayed underneath an error which describes the problem in more detail.

Action Contact your name server administrator to make sure that the server being connected to is running and listening on the address used, and that there is network connectivity between the two end-points.

- NNC-00406 name *name* does not exist**
- Cause** The user asked for information associated with a global name that does not exist.
- Action** Re-try the failing operation with a global name that exists.
-
- NNC-00407 alias loop in name request**
- Cause** The name service detected an "alias loop" when trying to retrieve information associated with a global name. An alias loop occurs when an alias name X points to another alias name Y, which in turn points back to X, rather than eventually to a global name which contains data.
- Action** Contact your name server administrator to have the alias loop investigated and fixed.
-
- NNC-00408 name *name* exists but desired data does not**
- Cause** The user asked for information associated with a global name. The name in question exists, but does not contain the desired type of information.
- Action** Re-try the failing operation with a type which the desired name does contain.
-
- NNC-00409 temporary name service failure**
- Cause** There are no name servers available to handle a client request, or a name server was temporarily unable to handle a client request. This situation is almost always temporary, and occurs when the program interface has issued a name server request and not received a timely response from any of its preferred servers. Such delays can occur due to transient network or name server outages or heavy load.
- Action** Re-try the failing operation. If the error persists, make sure there is network connectivity between the client and its preferred name servers, and contact your name server administrator to make sure that those name servers are running.
-
- NNC-00410 invalid preferred server address list**
- Cause** The names.preferred_servers parameter in sqlnet.ora is malformed.
- Action** Make sure the address list is properly formatted.
-
- NNC-00411 invalid default domain name *name***
- Cause** The names.default_domain parameter in sqlnet.ora is invalid.
- Action** Make sure the parameter value is a valid global name. See your documentation for the characters which may be used in a global name.

NNC-00412 invalid name *name*

Cause The name server program interface was given an invalid global name to process.

Action Supply a valid domain name. If the error is caused by an internal function, contact Worldwide Customer Support.

NNC-00413 general failure

Cause A name server program interface error occurred which did not fall under the heading of any other more specific error condition. The error will usually be followed by more specific lower-level information.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00414 invalid name-value binding string *name*

Cause A caller provided the name server program interface with an invalid name-value binding string value.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a valid name-value binding string argument. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00415 section identifier *num* is invalid, must be between *num* and *num*

Cause An internal function has called the name server program interface with illegal arguments.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00416 user callback function returned error number *num*

Cause An internal function has called the name server program interface with illegal arguments.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00417 name *name* already exists

Cause A caller has attempted to create a new global name, and that name already exists.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a name that does not already exist. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00418 name *name* cannot be modified because it has children

Cause A caller has attempted to delete or rename a global name, and that name cannot be modified because it has child names underneath it in the name space.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a name that is a leaf node. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00419 authoritative server is unreachable

Cause A name server request cannot be processed because the server which received the operation does not own the name specified in the request and cannot locate the server which does own the name. The error is almost always transient, and occurs either because the path between the server receiving the request and the request's final destination has been interrupted, or because the final destination is down.

Action Not normally visible to the user, except when using the name server control program. Because the error is typically a transient one, retrying the failing operation will usually work. If the failure persists, the name server which is allowed to process the failing operation is probably shut down or unreachable. Contact your name server administrator to make sure that your site's name servers are running, and are properly configured.

NNC-00420 operation not allowed

Cause A name server request cannot be processed because the server which received the operation is not allowed to process it. The problem typically occurs when an administrator has disabled request processing at a particular server for some reason.

Action Contact your name server administrator to determine why server request processing has been disabled.

- NNC-00421 invalid modification directive *name*, must be between *num* and *num***
- Cause** An internal function has called the name server program interface with illegal arguments.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NNC-00422 invalid data type name *name***
- Cause** A caller has provided an invalid data type name to the name server program interface.
- Action** Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a valid type name. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NNC-00423 invalid data item syntax code *num***
- Cause** A caller has provided an invalid data type code to the name server program interface.
- Action** Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a valid type name. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NNC-00424 invalid address *name***
- Cause** A caller provided the name server program interface with an invalid address value.
- Action** Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a valid address argument. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00425 meta-data violation

Cause A caller issued a name server modification request and that request cannot be processed because it would violate data type meta-data constraints.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, examine the meta-data constraints for the data type being operated upon and don't violate them. Examples of typical constraint violations are attempts to add a new data item to a name which already contains alias information, or attempts to add alias information to a name which already contains other data, or attempts to replace a data item with another item that has the wrong syntax. If the error occurs outside the control program, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00426 no such data type

Cause A caller attempted to create a data item, and could not because the data item's type does not exist.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the operation with an existent data type. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00427 server does not support this version of the protocol

Cause A name server message with an incompatible protocol version was received by a name server or the name server program interface. This problem will occur when there are clients and servers with widely varying protocol versions that are trying to communicate.

Action Upgrade older client and server software so it is compatible with newer software.

NNC-00428 invalid meta-data data item

Cause A caller provided the name server program interface with an invalid meta-data data item.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a valid meta-data argument. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00429 invalid octet string literal *num*

Cause A caller provided the name server program interface with an invalid octet string string value.

Action Not normally visible to the user, except when using the name server control program. If the error occurs when using the control program, retry the failing operation with a valid octet string argument. Otherwise, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNC-00500 warning: *name* parameter value is illegal, setting to *name*

Cause The named parameter value is invalid.

Action Make sure the parameter value is formatted correctly. Valid choices for boolean parameter values are TRUE, FALSE, YES, NO, ON, and OFF.

NNC-00501 warning: *name* parameter value must be between *num* and *num*, setting to *num*

Cause The named parameter value is invalid or outside legal boundary values.

Action Make sure the parameter value is a number, and falls between valid minimum and maximum values, as specified in the error text.

Oracle Names Control Utility (NNL-00001 to 01073)

NNL-00001 request argument *name* is invalid

Cause The user entered an invalid request command argument.

Action Supply a valid argument.

NNL-00002 request argument *name* is not allowed with this operation

Cause The user entered a request command argument which is not valid with the particular request command.

Action Supply a valid argument.

NNL-00003 memory exhausted

Cause The program has run out of memory

Action Check the amount of available memory on your machine to ensure that there is enough memory to run this executable. If necessary, free up memory by running fewer programs, then try again.

NNL-00004 invalid command argument *name*

Cause The user entered an invalid command argument.

Action Supply a valid argument.

NNL-00005 no server has been set. Use the SET SERVER command first

Cause The user attempted to issue a command which requires that a default managed Oracle Names server be set first.

Action Use the SET SERVER command to set your default server, then reissue the command. Alternatively, if the command allows, re-issue it with a specific server name so the control program does not need to use the default.

NNL-00006 timeout, server is not responding

Cause The control program issued a request to an Oracle Names server and no response arrived in a timely fashion. The network connection between the control program and the server may be faulty, the server may be very heavily loaded, or there may be substantial network delays between the control program and the server. The latter is especially true for WAN links.

Action Reissue the command; if it continues to fail, check to see that the server being managed is running correctly and that the network connection between the server and the control program is working correctly.

NNL-00007 server responded with an error

Cause The control program issued a request to an Oracle Names server and the server responded with an error.

Action For further details, turn on tracing and re-execute the failing operation. If the error persists, contact your customer service representative.

NNL-00008 request not understood by server

Cause The control program issued a request to an Oracle Names server and the server did not understand the request.

Action If the server and the control program have different versions, they may be unable to communicate. Check your documentation for version compatibility constraints. If the server and control program are compatible, turn on tracing for further details, and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNL-00009 encryption of server password failed

Cause The control program attempted and failed to encrypt a server password, supplied either through the SET PASSWORD command or the namesctl.server_password configuration parameter.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNL-00010 error getting address for server *name*

Cause The control program attempted to translate a server name to its corresponding address, and failed. There are a large number of possible causes for the failure. The control program's SQLNET.ORA file must exist in the correct system-specific location, and must be readable by the control program. The file must contain a names.preferred_servers entry with valid name server addresses. If the user has changed managed servers with the SET SERVER command, the new server must be running, and must be able to resolve the address or forward the request to another server which can resolve the address. Alternatively, a TNSNAMES.ORA file with valid name server names and addresses must exist in the correct system-specific location.

Action For further details, turn on tracing and re-execute the failing operation. If the error persists, contact your customer service representative.

NNL-00011 no server with name *name* exists

Cause The user issued a SET SERVER request and the current managed Oracle Names server was unable to translate that name into an address. Alternatively, the user issued a control program request to a specific server, and that server's name could not be translated into an address. Both problems are almost always caused by mis-typing the server name.

Action Re-issue the request with a valid server name.

NNL-00012 invalid *name* value *name*

Cause The first argument is a data type, the second is a value. The user supplied an invalid data value of the specified type.

Action Re-issue the failing operation with correct data.

NNL-00013 not performed, permission denied for supplied password

Cause The user issued a request to an Oracle Names server, and the password supplied with the request was incorrect.

Action Check to see that the password sent by the control program to the server is correct for that server. You can set a new password with the SET PASSWORD control program command.

NNL-00014 unknown data type *name*

Cause The user issued a name server request which contained an unknown data type.

Action It is possible that the server had no information on the type, but automatically fetched it in response to the failing request. Re-issue the failing request; if the server has in the meantime fetched the appropriate data type information, the error will go away. If the error persists, the data type is probably invalid.

NNL-00015 type *data_type* has *name* syntax, which has no textual representation

Cause Not all data type syntaxes can be represented as text. This message indicates that the user issued a name server request for a type with a non-textual representation.

Action Re-issue the operation with a data type that has a syntax with a textual representation.

NNL-00016 cannot start server, error getting program directory's name

Cause The user issued a STARTUP request, but the control program was unable to start the server because it was unable to find the name of the directory where the server executable resides.

Action An internal error not normally visible to the user. Contact Worldwide Customer Support.

NNL-00017 cannot start server, program *program_name* does not exist

Cause The user issued a STARTUP request, but the control program was unable to start the server because it was unable to find the server executable.

Action Make sure that a copy of the server executable exists in your system's oracle executable directory.

NNL-00018 warning: could not contact default name server

Cause The control program was unable to contact its default name server during startup. There are a number of possible causes for this error. The control program's SQLNET.ORA file must exist in the correct system-specific location, and must be readable by the control program. The file must contain a names.preferred_servers entry with valid name server addresses. The first server in the preferred-server list must be running, and there must be network connectivity between the control program and that server.

Action Check to see that all of the above are true. If the control program is still unable to contact its default server, turn on tracing and restart the control program. If the error persists, contact Worldwide Customer Support.

- NNL-00019 warning: server either changed or ignored your request**
- Cause** The user issued a request to an Oracle Names server and that request was altered in some way. Typically the user specified an invalid argument of some sort, and the server either ignored the request, or replaced the invalid argument with a reasonable default.
- Action** Use the control program to check the current state of the value that you attempted to change. The server's log file may also contain information about the exact cause of the problem. Re-issue the operation with correct arguments.
-
- NNL-00020 warning: no TNSNAMES.ORA file and no preferred name servers in SQLNET.ORA**
- Cause** The control program was unable to find a TNSNAMES.ORA file and was unable to find a default name server in SQLNET.ORA. The control program will operate in this state, but will be unable to resolve any names until a default server has been set, and that server must be set using its raw TNS address.
- Action** The control program's SQLNET.ORA file must exist in the correct system-specific location, and must be readable by the control program. The file must contain a names.preferred_servers entry with valid name server addresses. The first server in the preferred-server list must be running, and there must be network connectivity between the control program and that server. Alternatively, a TNSNAMES.ORA file with valid name server information must exist in the correct system-specific location.
-
- NNL-00022 error changing trace level from *num* to *num* level change ignored**
- Cause** The user attempted to change the control program's local trace level, and the program encountered an error while changing the level. Usually the problem is that tracing was enabled for the first time (by changing the trace level from OFF to something else) and the trace file is not writeable by the control program.
- Action** Check to see that the trace file is writeable. Your documentation will tell you the name of the trace file.
-
- NNL-00023 SET command is missing an argument**
- Cause** The user attempted to issue a SET command with no argument.
- Action** Supply a valid argument to the SET command.

NNL-00024 warning: no preferred name servers in SQLNET.ORA

Cause The control program was unable to find any preferred name servers in SQLNET.ORA, and will therefore not connect to a default server.

Action Make sure that the SQLNET.ORA file contains a valid names.preferred_servers entry.

Oracle Names Server Network Management Protocol (NMP-00001 to 00011)

NMP-00001 value too big

Cause The SNMP program interface received a value too large for it to process. This error is usually displayed underneath an error which describes in more detail the value which caused the problem.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support

NMP-00002 no such SNMP variable name

Cause An SNMP request was not processed because one or more of the variable names in the request does not exist. This error is not normally visible to the user except in a trace file, where it is usually part of a "soft" error condition which is normal.

Action The error may indicate that a managed server does not support an operation requested by its control program, perhaps because of version incompatibility. For further details, turn on tracing and re-execute the failing operation. If the error persists, and does not occur as part of a "soft" error condition as noted in the trace file, contact Worldwide Customer Support.

NMP-00003 bad SNMP variable value

Cause The SNMP program interface received a variable value which has an unsupported data type. This error may occur if a standard SNMP network monitor is sending requests to an Oracle service through an SNMP-to-TNS gateway, and that service cannot understand the requests.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, and occurs when an Oracle control program sends requests to an Oracle service, contact Worldwide Customer Support.

NMP-00004 SNMP variable is read only

Cause The user attempted to change a variable value at a remote server, and that variable is read-only. This error is usually displayed underneath an error which describes the problem in more detail.

Action Read-only variables may never be modified.

NMP-00005 general SNMP error

Cause An SNMP error occurred which did not fall under the heading of any other more specific error condition. This error may occur if a standard SNMP network monitor is sending requests to an Oracle service through an SNMP-to-TNS gateway, and that service cannot understand the requests.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, and occurs when an Oracle control program sends requests to an Oracle service, contact Worldwide Customer Support.

NMP-00005 general SNMP error

Cause An SNMP error occurred which did not fall under the heading of any other more specific error condition. This error may occur if a standard SNMP network monitor is sending requests to an Oracle service through an SNMP-to-TNS gateway, and that service cannot understand the requests.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, and occurs when an Oracle control program sends requests to an Oracle service, contact Worldwide Customer Support.

NMP-00006 uninitialized SNMP context

Cause An internal function attempted to use an uninitialized SNMP handle.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMP-00007 I/O failure

Cause The SNMP program interface attempted to send or receive an SNMP request and was unable to do so because of a network failure of some sort. This error is usually displayed underneath an error which describes the problem in more detail. The problem typically occurs when a control program is attempting to communicate with a service and either that service has unexpectedly terminated or the network path between the control program.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NMP-00008 SNMP message has incorrect version, version 0 is required

Cause The SNMP program interface received a protocol request with an illegal version number. This error may occur if a standard SNMP network monitor is sending malformed requests to an Oracle service through an SNMP-to-TNS gateway.

Action Ensure that the management platform in question is sending SNMP requests with the correct version number. If the error persists, and occurs when an Oracle control program sends requests to an Oracle service, contact Worldwide Customer Support.

NMP-00009 SNMP initialization failure

Cause The SNMP program interface could not be initialized, either because its error message file could not be found, or because there is a malformed snmp.communities parameter value in the parameter table.

Action Check that SQL*Net has been installed properly and that all message files are in their proper locations. Turn on tracing and look for parameter table load errors.

NMP-00010 memory exhausted

Cause The program interface has run out of memory.

Action Add more memory or run fewer processes.

NMP-00011 internal SNMP program interface error

Cause An internal error occurred inside the SNMP program interface. This error is usually displayed underneath an error which describes the problem in more detail.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

Oracle Names Server Network Presentation Layer (NPL-00100 to 00420)

NPL-00100 cannot initialize ASN.1 context

Cause The ASN.1 program interface could not be initialized, probably because its error message file could not be found.

Action Check that SQL*Net has been installed properly and that all message files are in their proper locations.

NPL-00101 uninitialized ASN.1 context

Cause The ASN.1 program interface received an uninitialized ASN.1 handle.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NPL-00102 missing stream functions in ASN.1 context initialization

Cause An internal function improperly attempted to initialize an ASN.1 handle.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support

NPL-00103 unusable ASN.1 context

Cause The ASN.1 program interface received an unusable ASN.1 handle.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NPL-00300 maximum ASN.1 element nesting depth *num* exceeded on read

Cause An ASN.1 construct is too complex for the program interface to read.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NPL-00301	maximum ASN.1 element nesting depth <i>num</i> exceeded on write
Cause	An ASN.1 construct is too complex for the program interface to write.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00302	ASN.1 type tag is greater than maximum of 16383
Cause	An internal function attempted to create an illegal ASN.1 construct.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00303	uninitialized ASN.1 class attribute
Cause	An internal function attempted to create an illegal ASN.1 construct.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00304	uninitialized ASN.1 tag attribute
Cause	An internal function attempted to create an illegal ASN.1 construct.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists contact Worldwide Customer Support.
NPL-00305	unsupported ASN.1 \”UNIV\” type <i>name</i>
Cause	An internal function attempted to create an illegal ASN.1 construct.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00307	ASN.1 sequence has already been ended on write
Cause	An internal function attempted to end an ASN.1 construct prematurely.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NPL-00308	requested ASN.1 class <i>name</i> does not match received class <i>name</i>
Cause	An internal function requested an ASN.1 construct different from that received by the ASN.1 protocol engine.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00309	requested ASN.1 type tag <i>name</i> does not match received type tag <i>name</i>
Cause	An internal function requested an ASN.1 construct different from that received by the ASN.1 protocol engine.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00310	ASN.1 sequence has already been ended on read
Cause	An internal function attempted to finish reading an ASN.1 construct which has already been completely read.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00311	cannot end constructed ASN.1 encoding, <i>num</i> encoding octets unread
Cause	An internal function attempted to finish reading an ASN.1 construct prematurely.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00312	attempt to put ASN.1 \ "UNIV\ " type with illegal tag <i>num</i>
Cause	An internal function attempted to finish reading an ASN.1 construct prematurely.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

- NPL-00313 requested form *name* does not match actual form *name***
- Cause** An internal function received an ASN.1 construct different from that expected.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NPL-00410 incoming ASN.1 value too large (*num* octets) to store locally**
- Cause** The ASN.1 protocol engine was unable to translate an ASN.1 construct to its host representation because the construct was too big.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NPL-00411 incoming ASN.1 NULL encoding has nonzero length of *num***
- Cause** The ASN.1 protocol engine received a corrupted ASN.1 construct.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NPL-00412 incoming ASN.1 BOOLEAN encoding has incorrect length of *num***
- Cause** The ASN.1 protocol engine received a corrupted ASN.1 construct.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NPL-00413 incoming ASN.1 encoding has length *num*, maximum allowed is *num***
- Cause** The ASN.1 protocol engine received an ASN.1 construct too large for it to process.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
-
- NPL-00414 incoming ASN.1 type tag is greater than maximum of 16383**
- Cause** The ASN.1 protocol engine received an illegal ASN.1 construct.
- Action** Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NPL-00415	received unsupported ASN.1 INDEFINITE-LENGTH encoding
Cause	The ASN.1 protocol engine received an ASN.1 encoding which it could not process because its implementation does not support it.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00416	received illegal ASN.1 encoding length of <i>num</i>
Cause	The ASN.1 protocol engine received a corrupted ASN.1 construct.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00417	received ASN.1 length octet count greater than maximum of <i>num</i>
Cause	The ASN.1 protocol engine received an ASN.1 encoding which it could not process because its implementation does not support it.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00418	received malformed ASN.1 object identifier
Cause	The ASN.1 protocol engine received a corrupted ASN.1 construct.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.
NPL-00419	received ASN.1 object identifier with sub-identifier that is too large
Cause	The ASN.1 protocol engine received an ASN.1 encoding which it could not process because its implementation does not support it.
Action	Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NPL-00420 received ASN.1 object identifier with more than 256 sub-identifiers

Cause The ASN.1 protocol engine received an ASN.1 encoding which it could not process because its implementation does not support it.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

SNMP Support Error Messages

This chapter describes the messages generated by SNMP Support. The messages include:

- configuration and startup errors. These messages may be generated by any service using SNMP support.
- database subagent error messages. These messages are specific to the database.

Configuration and Startup Error Messages—All Services (NMS-00000 to 00050)

NMS-00001 *service unable to connect to SNMP master agent*

Cause The specified service could not contact the SNMP master agent. The master agent supported by Oracle for this platform is not installed, or has not been started. Messages specific to this platform follow.

Action Consult Oracle documentation for your platform, and then make sure that the correct SNMP master agent is installed and started.

NMS-00002 *service failed to allocate memory for snmp.ora parameters*

Cause The specified service was unable to allocate enough memory to hold all the snmp.ora parameters. This may indicate that the parameters are too big, but more likely is a system error.

Action Check system configuration and if possible, reduce the number of the processes running. If this does not fix the problem, report as a bug.

NMS-00003 *service could not find snmp.ora file, or it was malformed*

Cause The snmp.ora file could not be opened and read by the specified service. The location of this file varies by platform, but normally it must be in the same directory as other SQL*Net parameter files. Detailed error messages may follow this one, if the problem could be traced to a specific parameter.

Action Consult the documentation for your platform, then create the file in the proper location, and restart the program.

NMS-00004 *service unable to register MIB or MIB row*

Cause The specified service was unable to register its MIB or MIB row with the master agent.

Action Consult the documentation for SNMP on your platform. If the messages indicate that another program already has that MIB or MIB row registered, you may want to terminate that program, then retry.

NMS-00005 *snmp.visible services parameter in snmp.ora is missing or empty*

Cause The snmp.ora file does not contain a filled-in snmp.visible services parameter, or it's empty.

Action Edit or create the snmp.ora file and try again.

NMS-00006 Required parameter *parameter* was not found in snmp.ora

Cause The snmp.ora file did not contain the indicated parameter, which was required. Normally this would happen because one of the services mentioned in snmp.visible services required one or more detail parameters to be supplied, such as the one indicated.

Action Edit or create the snmp.ora file and try again.

NMS-00007 *service* failed to allocate memory

Cause The specified service was unable to allocate memory.

Action Check system configuration and if possible, reduce the number of the processes running. If this does not fix the problem, report as a bug.

Database Subagent Errors (NMS-00200 to 00250)

NMS-00202 Failure to connect to the database

Cause The database subagent was unable to connect to the database. The detailed error message, which is documented in Oracle7 Server manuals, follows.

Action Consult Oracle7 Server documentation for the detailed error message.

NMS-00203 Error *number* disconnecting from the database: *error text*

Cause The database subagent was unable to connect to the database, and received the specified error number and text message. The detailed error message, which is documented in Oracle7 Server manuals, follows.

Action Consult Oracle7 Server documentation for the detailed error message.

NMS-00204 Failure to listen on address *address*

Cause The database subagent was unable to listen on the specified TNS address, possibly because another instance of the database agent has already claimed the address. If more information is available, it will appear under this error.

Action If another instance of the database agent is already running, either allow it to continue running or bring it down and try again. Otherwise, see "Actions" for the other TNS errors.

**NMS-00205 Failure to connect to database *SID* with username/password
*username/password***

Cause The database subagent was unable to listen on the specified TNS address, possibly because another instance of the database agent has already claimed the address. If more information is available, it will appear under this error.

Action If another instance of the database agent is already running, either allow it to continue running or bring it down and try again. Otherwise, see "Actions" for the other TNS errors.

Selected Database Subagent Log Messages (NMS-00250 to 00275)

Log messages are informational only and do not indicate an error condition. Most log messages are self-explanatory and are not listed here. Only those that may require some explanation are listed in this section.

NMS-00253 Connected successfully to database *Oracle_SID*

Cause The subagent successfully logged on to the specified database. This message may also be output if the database goes down and comes back up.

Action None

NMS-00255 Database *Oracle_SID* became unreachable; trap sent

Cause The specified database became inaccessible, and the subagent then sent an SNMP trap. This may not indicate a problem, since the database may have been shut down deliberately (the subagent is unable to distinguish the cause of the inaccessibility).

Action Consult the Oracle7 Server documentation, if the shutdown was not deliberate. If traps are not being received at your management station(s), consult the platform SNMP documentation and ensure that the management station's address is configured properly for the master agent.

Native Naming Adapter Error Messages

This chapter describes the messages generated by Oracle's native naming adapters. The messages include:

- general native naming adapter messages
- DCE CDS naming adapter messages
- NIS naming adapter messages
- BIND/DNS naming adapter messages
- native naming conversion tool messages

Native Naming Generic Errors (NNF-00001 to 00099)

NNF-00001 Not a TNS address

Cause While asking to read an address the name service returned a record which was not an address.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNF-00002 Invalid value passed to function call

Cause An invalid value was passed to an interface function.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNF-00003 Naming adapter *adapter* does not exist

Cause The requested name service adapter was not found in the current adapter table.

Action Check the spelling of the adapter requested. Verify that the adapter runs on this platform, and the adapter is compiled into the adapter table linked into the executable.

NNF-00004 Operation not supported in *string*

Cause The operation requested is not supported under this adapter.

Action Verify that the operation being performed is not under restriction, such as writing to read-only name service. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNF-00005 Functionality not implemented

Cause The operation requested is not supported in this implementation.

Action If this is retrieved from a production release, contact Worldwide Customer Support. Otherwise, check the release notes as to the restrictions in this release.

DCE CDS Adapter Error Messages (NNF-01000 to 01999)

NNF-01001 ds_initialize: workspace initialization failed

Cause The DCE workspace as setup by ds_initialize() failed to initialize.

Action Verify that conditions necessary for a successful ds_initialize() call are present on this platform (e.g is there enough memory?). Check that there is not another workspace user in this program. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNF-01002 DCE could not open configuration file

Cause A DCE call returned an error that it could not access its configuration file.

Action Check that the DCE configuration file for this platform is present, and accessable. On UNIX this file is dce_cf.db. Check if a simple call to dce_cf_get_cell_name() succeeds.

NNF-01003 DCE could not find cell name

Cause A DCE call returned an error that it could not find the cell name in its configuration file.

Action Check that this machine has been configured for a DCE cell. Chcek that the DCE configuration file is not corrupted. On UNIX, this file is dce_cf.db. Check if a simple call to dce_cf_get_cell_name() succeeds.

NNF-01004 DCE returned unspecified error error

Cause A DCE call returned an status that was not in this implementation's list of possible status values for this DCE call.

Action Verify that this platform's DCE release is not beyond those supported by this Oracle application. If the error persists, contact Worldwide Customer Support.

NNF-01005 Internal XOM class violation

Cause A DCE XOM call returned statuses inconsistent with the class definitions in the DCE documentation.

Action Not normally visible to the user. For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNF-01006 Attribute *attribute* not available

Cause A insertion call attempted to use an attribute which did not have a translation to a DCE attribute.

Action Use another attribute, or insert the translation into DCE).

NNF-01007 DCE long strings are not supported

Cause A query returned a object which has a XOM OM_S_LONG_STRING. The current implementation does not support such objects.

Action For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NNF-01008 XDS attribute syntax *string* incorrect for Oracle Names syntax

Cause The syntax as specified in the XDS object is different than that which is expected for the given Oracle names syntax.

Action For further details, turn on tracing and re-execute the failing operation. If the error persists, contact Worldwide Customer Support.

NIS Adapter Error Messages (NNF-02000 to 02999)

NNF-02001 NIS client error string *string*

Cause A call to an NIS (YP) function failed. This message contains the text of the NIS error code returned.

Action Should only be visible when returned as part of another error. If the error persists, contact Worldwide Customer Support.

NNF-02002 NIS value does not conform to adapter schema: *schema*

Cause The values in the maps used by the NIS adapter must conform to a specific set of internal formatting rules. This value returned did not conform to those rules.

Action Should not be visible, unless you are attempting to create your own maps. If the error persists, contact Worldwide Customer Support.

NNF-02003 Unknown NIS error code: *error*

Cause An error code returned by a NIS (YP) function was not in the list expected by this program.

Action Verify that the error is generated by the YP functions on this platform. Notify Worldwide Customer Support of the error.

NNF-02004 NIS map *attribute* does not exist

Cause The requested attribute does not exist.

Action For an unused attribute, no action is required, as this is the expected error. Otherwise, add the attribute with the network administration tool, and reload the NIS (YP) maps.

NNF-02005 NIS key *name* does not exist in map *map*

Cause The requested name was not found.

Action For an unused name, no action is required, as this is the expected error. Otherwise, add the name to the map with the network administration tool, and reload the NIS (YP) maps.

BIND/DNS Error Messages (NNF-03000 to 03999)

NNF-03002 Unknown BIND error code: *error*

Cause The return code in the BIND (DNS) query response did not conform to those values listed in RFC 1035.

Action Verify that the error is generated by the BIND functions on this platform. Notify Worldwide Customer Support of the error.

NNF-03003 Format error parsing server response

Cause The query response packet returned from the BIND (DNS) API did not conform to the format listed in RFC 1035.

Action Verify that the error is generated by the BIND functions on this platform. Notify Worldwide Customer Support of the error.

NNF-03004 DNS Class mismatch (*class*)

Cause The query response packet returned a class different from the ones expected by the interface.

Action Verify that the error is generated by the BIND functions on this platform. Notify Worldwide Customer Support of the error.

Native Names Conversion Tool Messages (NNF-04000 to 04999)

NNF-04000 File succesfully converted

Cause The requested conversion is performed.

Action Normal condition, no action necessary.

NNF-04001 Error converting input file

Cause The input file contains lines that cannot be converted by the conversion program.

Action Only use files generated by Network Manager.

NNF-04002 Output file already exists

Cause An old output file already exists in the current directory

Action Remove the existing file, and restart the conversion tool

NNF-04003 Entry in input file is too long

Cause The makedbm program, limits entries in mapfiles to 1017 characters. Therefore, the conversion tool will not process TNS addresses which are longer than 1017 characters.

Action Only use files generated by Network Manager

NNF-04004 Invalid string in input file

Cause The input file contains invalid lines.

Action The conversion program will only handle files generated by the network manager. Regenerate the file from the network manager and restart the conversion tool.

NNF-04005 Cannot open input file

Cause The specified input file could not be found.

Action Restart the conversion tool with the correct input file.

NNF-04006 Could not create output file

Cause An output file could not be created in the current working directory

Action Change the permissions of the current directory and restart the conversion tool.

NNF-04007 Error reading input file

Cause A problem while reading the input file. This could be caused by an unexpected end of file in the input file.

Action The conversion program will only handle files generated by the network manager. Regenerate the file from the network manager and restart the conversion tool.

NNF-04008 Error writing output file

Cause An error occurred while writing to the output file.

Action Check available disk space. If the error persists, contact Worldwide Customer Support.

NNF-04009 Usage: tns2nis *filename*

Cause The conversion tool was not invoked properly. The file name should either be tnsnames.ora or native.ora

Action Restart the conversion tool with the proper parameter.

A

Trace and Log Parameter Reference

This chapter provides a complete reference to the valid parameters used in controlling tracing and logging in a SQL*Net network. This information is intended to supplement the information presented in Chapter 2, "Log and Trace Facilities." This chapter includes the following information:

- Client trace and log parameters
- Server trace and log parameters
- Listener trace and log parameters
- Connection Manager trace and log parameters
- Navigator trace and log parameters
- Names server trace and log parameters
- NAMESCTL trace parameters

The name of the component configuration files will be of the form *component_name*.ORA, as in SQLNET.ORA, LISTENER.ORA, INTCHG.ORA, or NAMES.ORA. The actual name of the file may vary on the distribution media for your operating system. For simplicity, this manual consistently refers to SQLNET.ORA, LISTENER.ORA, INTCHG.ORA, and NAMES.ORA files as the configuration files. Any variations in the file names and the expected locations of these



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configuration files and the trace output files are documented in the Oracle operating system-specific manuals for your platform.

Specifying Values in the Component Configuration File



The component configuration file is a short text file that contains a list of parameters and a value for each parameter. Create and modify the configuration files by using Oracle Network Manager. See the *Oracle Network Manager Administrator's Guide* for information about how to enter or edit information about tracing and logging parameters in the configuration files.

Oracle Network Manager creates lines in the configuration files that look similar to this:

```
TRACE_LEVEL_CLIENT = ADMIN
TRACE_FILE_CLIENT = CTRACE
```

Note: There are some parameters in SQLNET.ORA that must be entered and modified manually rather than through Oracle Network Manager. These include log and trace parameters for the server, trace parameters for TNSPING, and trace parameters for the NAMESCTL utility.

The following rules govern how you specify parameters in the component configuration files:

- Only parameters and comments should appear in the component configuration file.
- If the configuration file omits a parameter, then the parameter's default value is in effect.
- Parameters can be specified in any order.
- Parameter names are shown in this appendix and this manual in upper case for readability. Case (upper or lower) is only significant in values if case is significant on the host operating system. Refer to your operating system-specific documentation if you require more information.
- A pound sign (#) is used to start each line that contains a comment.
- Double quotes can surround parameter values, such as file names. This syntax option is useful for values that contain special characters.

See Chapter 2, "Trace and Log Facilities," on how to initiate tracing using new parameters.

Client Trace and Log Parameter Descriptions

TRACE_LEVEL_CLIENT This parameter determines the level of trace detail produced for a client application. After trace is initiated, setting the trace level to OFF disables trace. Trace should be OFF except for short diagnostic sessions.

Configuration file: SQLNET.ORA

Default value: OFF

OK to change? yes

Range of values: [OFF | USER | ADMIN]

OFF = No user specified tracing. This value can be used to disable trace.

USER = End-user level: Trace to provide information to identify error conditions such as:

- addressing errors
- client installation errors
- runtime show-stopper errors (for example, protocol stack not loaded)

ADMIN = Administrator level: Trace to include more detailed information including:

- site configuration-specific failures (look-up files, and so on)
- protocol specific errors
- configuration inconsistencies
- client installation errors
- errors in interaction with third party software

TRACE_FILE_CLIENT This parameter controls the trace output file name for a TNS client application. By default, the file name on most operating systems is SQLNET.TRC. A new trace output file is generated for each trace session. A trace session begins when the TNS client application is initiated with valid trace parameters.

Note: Unless a new value for the TRACE_FILE_CLIENT parameter is specified or the old trace file is renamed, or the TRACE_UNIQUE_CLIENT parameter (described next) is set to ON, the new trace output file replaces the old trace output file.

Configuration file:	SQLNET.ORA
Default value:	SQLNET
OK to change?	yes
Ranges of values:	valid filename

Example:

```
TRACE_FILE_CLIENT = CLIENTA
```

This example generates a trace file called CLIENTA.TRC

Note: On most operating systems, TNS appends the .TRC suffix to the trace file name, so there is no need to specify it in the configuration file.

TRACE_UNIQUE_
CLIENT

This parameter determines whether or not a unique trace file is created for each client. By default, the value is OFF, and only one trace file is created for a client. If the value is OFF, when a new trace file is created for a client, it overwrites the existing file. If the value is set to ON, a process identifier is appended to the name of each trace file generated so that several can coexist. The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform. For example, on a UNIX machine the format would be similar to the following:



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```
CLIENTA_3123.TRC
```

Note: Trace files are usually very large. If this parameter is set to ON, the number of large trace files created could interfere with the efficiency of your machine. Therefore, use it carefully.

TRACE_DIRECTORY_
CLIENT

This parameter is used to override the default placement of the trace output file for an Oracle client. By default, the trace output is written in the current directory.

Configuration file:	SQLNET.ORA
Default value:	See your Oracle operating system documentation.
OK to change?	yes
Ranges of values:	valid directory
Example:	See your Oracle operating system documentation.



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LOG_FILE_CLIENT

This parameter controls the log output file name for an Oracle client. By default the log file generated is called SQLNET.LOG. Log files always append new information to the end of the existing log until the administrator prunes the log file.

Note: On most operating systems, TNS appends the .LOG suffix to the log file name, so there is no need to specify it in the configuration file.

Configuration file:	SQLNET.ORA
Default value:	SQLNET
OK to change?	yes
Ranges of values:	valid filename

Example:

```
LOG_FILE_CLIENT = CLIENT
```

This example generates a log file called CLIENT.LOG.

LOG_DIRECTORY_
CLIENT

This parameter is used to override the default placement of the log output file for an Oracle client. By default the log file is written in the current directory.

Configuration file:	SQLNET.ORA
Default value:	See your Oracle platform-specific documentation.
OK to change?	yes
Ranges of values:	valid directory
Examples:	See your Oracle platform-specific documentation.



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Server Trace and Log Parameter Descriptions

TRACE_LEVEL_SERVER This parameter determines the level of trace detail produced for an Oracle server. Setting the trace level to OFF will disable trace.

Configuration file:	SQLNET.ORA
Default value:	OFF
OK to change?	yes
Range of values:	[OFF USER ADMIN]

OFF = No user specified tracing. This value can be used to disable trace.

USER = End-user level: Trace to provide additional information to identify user induced error conditions such as:

- addressing errors
- server installation errors

- runtime show-stopper errors (for example, protocol stack not loaded)

ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of "finger pointing" in case of third party stacks, and for the following situations:

- site configuration-specific failures (for example, look-up files)
- protocol specific errors
- configuration inconsistencies
- server installation errors
- errors in interaction with third party software

TRACE_FILE_SERVER



This parameter generates the trace file name for an Oracle server. By default the trace file generated by the server is called SQLNET.TRC. Note that for each trace session a trace output file is generated. On most operating systems, each trace file automatically appends the process identifier of the current process to the file name so that previous files are not overwritten. The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform.

Note: On most operating systems, TNS appends the .TRC suffix to the trace file name, so there is no need to specify it in the configuration file.

Configuration file:	SQLNET.ORA
Default value:	SQLNET
OK to change?	yes
Ranges of values	valid filename

Example:

```
TRACE_FILE_SERVER = SERVERA
```

On a UNIX machine, this example might generate a trace file called SERVERA_5798.TRC.

TRACE_DIRECTORY_SERVER

This parameter is used to override the placement of the trace output file for an Oracle server. The default location is specific to each operating system. See the Oracle operating system-specific manual for your platform for details.



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Configuration file:	SQLNET.ORA
Default value:	See your Oracle platform-specific documentation.
OK to change?	yes
Range of values:	valid directory
Example:	See your Oracle platform-specific documentation.

LOG_FILE_SERVER

This parameter controls the log file name for an Oracle server. By default the log file generated is called SQLNET.LOG. Log files always append new information to the end of the existing log until the administrator prunes the log file.

Note: On most operating systems, TNS appends the .LOG suffix to the log file name, so there is no need to specify it in the configuration file.

Configuration file:	SQLNET.ORA
Default value:	SQLNET
OK to change?	yes
Ranges of values:	valid filename

Example:

```
LOG_FILE_SERVER = SERVER
```

This example generates a log file called SERVER.LOG

LOG_DIRECTORY_SERVER

This parameter is used to override the placement of the log output file for an Oracle server. The default location is specific to each operating system.



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Configuration file:	SQLNET.ORA
Default value:	See your Oracle platform-specific documentation.
OK to change?	yes
Range of values:	valid directory
Example:	See your Oracle platform-specific documentation.

Listener Trace and Log Parameter Descriptions

TRACE_LEVEL_LISTENER

This parameter determines the level of trace detail produced for the network listener. Setting the trace level to OFF disables trace.

Configuration file:	LISTENER.ORA
Default value:	OFF
OK to change?	yes
Range of values:	[OFF USER ADMIN]

OFF = No user specified tracing. This value can be used to disable trace.

USER = End-user level: Trace to provide additional information to identify user induced error conditions such as:

- addressing errors
- listener installation errors
- runtime show-stopper errors (for example, protocol stack not loaded)

ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of "finger pointing" in case of third party stacks, and for the following situations:

- site configuration-specific failures (look-up files, and so on)
- protocol specific errors
- configuration inconsistencies
- network listener installation errors
- errors in interaction with third party software

TRACE_FILE_LISTENER This parameter controls the trace file name for the listener. By default the trace file generated by the listener is called LISTENER.TRC. Note that for each trace session a trace output file is generated. Unless a new value TRACE_FILE_LISTENER parameter is specified or the old trace file is relocated or renamed, the new trace output file overwrites the old trace output file.

Note: On most operating systems, the .TRC suffix is automatically appended to the trace file name, so there is no need to specify it in the configuration file.

Configuration file:	LISTENER.ORA
Default value:	LISTENER
OK to change?	yes
Range of values	valid filename

Example:

```
TRACE_FILE_LISTENER = LSNRA
```

This example generates a trace file called LSNRA.TRC.

Note: If you use a name for the listener other than the default name for the listener (that is, LISTENER), the trace filename would be the name of the non-default listener; for example, LISNAGAIN.TRC.

TRACE_DIRECTORY_
LISTENER

This parameter is used to override the placement of the trace output file for the TNS Listener. The default value is specific to each operating system.

Configuration file:	LISTENER.ORA
Default value:	See your Oracle platform-specific documentation
OK to change?	yes
Range of values:	valid directory
Example:	See your Oracle platform-specific documentation.



LOG_FILE_LISTENER

This parameter controls the log output file name for the Listener. By default the log file generated is called LISTENER.LOG. If you use other than the default name for the listener (that is, LISTENER), the log filename would be the name of that non-default listener, for example, LISNAGAIN.LOG. Log files always append new information to the end of the existing log until the administrator prunes the log file.

Note: On most operating systems, TNS appends the .LOG suffix to the log file name, so there is no need to specify it in the configuration file.

Configuration file:	LISTENER.ORA
Default value:	LISTENER
OK to change?	yes
Ranges of values:	valid filename

Example:

```
LOG_FILE_LISTENER = LSNR
```

This example generates a log file called LSNR.LOG

LOG_DIRECTORY_
LISTENER

This parameter is used to override the placement of the log output file for the listener. By default the log is written in the current working directory.



Configuration file:	LISTENER.ORA
Default value:	See your Oracle platform-specific documentation.
OK to change?	yes
Range of values:	valid directory
Example:	See your Oracle platform-specific documentation.

TNSPING Utility Trace Parameter Descriptions

TNSPING.TRACE_ LEVEL

This parameter determines the level of trace detail produced for the TNSPING utility. Setting the trace level to OFF will disable trace.

Configuration file:	SQLNET.ORA
Default value:	OFF
OK to change?	yes
Range of values:	[OFF USER ADMIN]

OFF = No user specified tracing. This value can be used to disable trace.

USER = End-user level: Trace to provide additional information to identify user induced error conditions such as:

- addressing errors
- server installation errors
- runtime show-stopper errors (for example, protocol stack not loaded)

ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of "finger pointing" in case of third party stacks, and for the following situations:

- site configuration-specific failures (for example, look-up files)
- protocol specific errors
- configuration inconsistencies
- server installation errors
- errors in interaction with third party software

TNSPING.TRACE_
DIRECTORY

This parameter is used to override the placement of the trace output file for the TNSPING utility. The default location is specific to each operating system. See the Oracle operating system-specific manual for your platform for details.

Configuration file: SQLNET.ORA
Default value: See your Oracle operating system documentation.
OK to change? yes
Range of values: valid directory
Example: See your Oracle operating system documentation.



TNSPING.TRACE_LEVEL = ADMIN
TNSPING.TRACE_DIRECTORY = /usr/bin

Connection Manager and Pump Trace and Log Parameter Descriptions

TRACE_LEVEL_
CMANAGER

This parameter determines the level of trace detail produced. Setting the trace level to OFF disables trace.

Configuration file: INTCHG.ORA
Default value: OFF
OK to change? yes
Range of values: [OFF | USER | ADMIN]

OFF = No user specified tracing. This value can be used to disable trace.

USER = User level: The tracing at this level is limited.

ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of "finger pointing" in case of third party stacks, and for the following situations:

- site configuration-specific failures (look-up files, and so on)
- protocol specific errors
- configuration inconsistencies
- Interchange installation errors
- errors in interaction with third party software

TRACE_FILE_CMAMANAGER



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This parameter controls the trace file name for the Connection Manager. By default the trace file generated by the Connection Manager is called CMG.TRC. Note that for each trace session a trace output file is generated. On most operating systems, the trace facility automatically appends a process identifier to the trace file name of the Connection Manager to make it distinct from previously generated trace files. The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform.

Note: On most operating systems, the .TRC suffix is appended to the trace file name automatically, so there is no need to specify it in the configuration file.

Configuration file:	INTCHG.ORA
Default value:	CMG
OK to change?	yes
Range of values	string

Example:

```
TRACE_FILE_CMAMANAGER = CMAMANAGER
```

On a UNIX machine, this example might generate a trace file called CMAMANAGER_4321.TRC, and a pump trace file called PMP_3198.TRC.

Note: All pump trace properties are determined by the corresponding Connection Manager parameters, although a separate trace file is created for a pump. The default name for a pump trace file, PMP_*pid*.TRC, cannot be changed.

TRACE_DIRECTORY_CMAMANAGER



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This parameter is used to override the placement of the trace output file for the Connection Manager. The default value is specific to each operating system.

Configuration file:	INTCHG.ORA
Default value:	See your Oracle operating system-specific documentation.
OK to change?	yes
Range of values:	valid directory
Example:	See your Oracle platform-specific documentation.

LOG_FILE_CMAMANAGER

This parameter controls the log output file name for the Connection Manager. By default the log file generated is called INTCHG.LOG. Log files always append new information to the end of the existing log until the administrator prunes the log file.

Note: On most operating systems, the .LOG suffix is appended to the log file name automatically, so there is no need to specify it in the configuration file.

Configuration file:	INTCHG.ORA
Default value:	INTCHG
OK to change?	yes
Range of values:	string

Example:

```
LOG_FILE_CMANNER = CMANNER
```

This example generates a log file called CMANNER.LOG.

Note: Pump statistics are included in the log file for the Connection Manager.

LOG_DIRECTORY_
CMANNER

This parameter is used to override the placement of the log output file for the listener. By default the log is written in the current working directory.

Configuration file:	INTCHG.ORA
Default value:	See your Oracle operating system specific documentation.
OK to change?	Not configurable using Network Manager
Range of values:	valid directory
Example:	See your Oracle operating system specific documentation.



LOGGING_
CMANNER

This parameter indicates whether the Connection Manager should log information to the log file to maintain Interchange statistics. This is an optional parameter.

Configuration file:	INTCHG.ORA
Default value:	OFF
OK to change?	Use Logging Level field in Network Manager
Range of values:	[OFF ON]

LOG_INTERVAL_
CMANNER

This parameter indicates the interval between logs of the Interchange statistics in the INTCHG.LOG file.

Note: Setting the log interval to a low value adversely affects Interchange performance, and the log file may become quite large.

Configuration file:	INTCHG.ORA
Default value:	60 minutes

OK to change?	yes
Ranges of values:	1–99

Navigator Trace and Log Parameter Descriptions

TRACE_LEVEL_ NAVIGATOR	<p>This parameter determines the level of trace detail produced for the Navigator. Setting the trace level to OFF will disable trace. The Interchange is not intended to be traced by anyone other than an administrator; so the ADMIN level is recommended for Interchange modules.</p> <p>Configuration file: INTCHG.ORA Default value: OFF OK to change? yes Ranges of values: [OFF USER ADMIN]</p> <p>OFF = No user specified tracing. This value can be used to disable trace.</p> <p>USER = User level: The tracing at this level is limited.</p> <p>ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of "finger pointing" in case of third party stacks, and for following situations:</p> <ul style="list-style-type: none">• site configuration–specific failures (look–up files, and so on)• protocol specific errors• configuration inconsistencies• Navigator installation errors• errors in interaction with third party software• Navigator queries and answers
TRACE_FILE_ NAVIGATOR	<p>This parameter controls the trace file name for the Navigator. By default the trace file generated by the Navigator is called NAV.TRC. Note that for each trace session a trace output file is generated. Each time a new trace file is created, a process identifier is appended to the name of the trace file so that it is unique. The format of the appended process identifier is platform specific and is described in the Oracle operating system–specific manual for your platform.</p>



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Note: On most operating systems, the .TRC suffix is appended to the trace file name automatically, so there is no need to specify it in the configuration file.

Configuration file:	INTCHG.ORA
Default value:	NAV
OK to change?	yes
Ranges of values:	string

Example:

```
TRACE_FILE_NAVIGATOR = NAVTEST
```

On a UNIX machine, this example might generate a trace file called NAVTEST_5234.TRC.

TRACE_DIRECTORY_NAVIGATOR

This parameter is used to override the placement of the trace output file for the Navigator. The default value is specific to each operating system.

Configuration file:	INTCHG.ORA
Default value:	See your Oracle platform-specific documentation.
OK to change?	yes
Range of values:	valid directory



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Examples: See your Oracle platform-specific documentation.

LOG_FILE_NAVIGATOR

This parameter controls the log output file name for the Navigator. By default the log file generated is called NAV.LOG. Log files always append new information to the end of the existing log until the administrator prunes the log file.


Note: On most operating systems, the .LOG suffix is appended to the log file name automatically, so there is no need to specify it in the configuration file.

Configuration file:	INTCHG.ORA
Default value:	NAVLOG
OK to change?	yes
Range of values:	string

Example:

```
LOG_FILE_NAVIGATOR = NAVLOG
```

This example generates a log file called NAVLOG.LOG

<div>LOG_DIRECTORY_NAVIGATOR</div> <div>  <div>OS Doc</div> </div>	This parameter is used to override the placement of the log output file for the Navigator. By default the log is written in the current working directory.	
	Configuration file:	INTCHG.ORA
	Default value:	See your Oracle platform-specific documentation.
	OK to change?	Not configurable using Network Manager.
	Range of values:	valid directory
	Examples:	See your Oracle platform-specific documentation.

LOGGING_NAVIGATOR	This parameter determines whether the Navigator logs requests it receives for navigation. This is an optional parameter.	
	Configuration file:	INTCHG.ORA
	Default value:	OFF
	OK to change?	Use Logging Level field in Network Manager.
	Range of values:	[OFF ON]

LOG_LEVEL_NAVIGATOR	This parameter takes effect only when the LOGGING_NAVIGATOR parameter is set to ON. LOG_LEVEL_NAVIGATOR determines what requests are logged. Choices are ERRORS and ALL. If ERRORS, then all errors in navigation are logged. If ALL, then all navigation requests are logged.	
	Configuration file:	INTCHG.ORA
	Default value:	ERRORS
	OK to change?	yes
	Range of values:	[ERRORS ALL]

Names Server Trace and Log Parameter Descriptions

NAMES.TRACE_LEVEL	This parameter indicates the level at which the Names server is to be traced. Setting the level to OFF will disable trace.	
	Configuration file:	NAMES.ORA
	Default value:	OFF
	OK to change?	yes
	Ranges of values:	[OFF USER ADMIN]
	OFF = No user specified tracing. This value can be used to disable trace.	

USER = End-user level: Trace to provide additional information to identify user induced error conditions such as:

- addressing errors
- server installation errors
- runtime show-stopper errors (for example, protocol stack not loaded)

ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of "finger pointing" in case of third party stacks, and for the following situations:

- site configuration-specific failures (for example, look-up files)
- protocol specific errors
- configuration inconsistencies
- server installation errors
- errors in interaction with third party software

NAMES.TRACE_FILE This parameter generates the name of the output file from a Names server trace session. By default the trace file generated by the Names server is called NAMES. Note that for each trace session a trace output file is generated. On most operating systems, if NAMES.TRACE_UNIQUE is set to ON or TRUE in the NAMES.ORA configuration file, each trace file appends the process identifier of the current process to the filename so that previous files are not overwritten. If files are not overwritten with the process identifier, many files accumulate, which uses up a lot of disk space. The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform.

Note: On most operating systems, TNS appends the .TRC suffix to the trace file name, so there is no need to specify it in the configuration file.

Configuration file:	NAMES.ORA
Default value:	names
OK to change?	yes
Ranges of values	valid filename

Example:

NAMES.TRACE_FILE = NAMES_SUN_03



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```
NAMES.TRACE_UNIQUE = TRUE
```

On a UNIX machine, this example might generate a trace file called NAMES_5798.TRC.

NAMES.TRACE_DIRECTORY

This parameter determines the name of the directory to which trace files from a Names server trace session are written. The default value is specific to each operating system.

Note: You must set NAMES.TRACE_DIRECTORY in NAMES.ORA, then restart the Names server. You cannot set this from NAMESCTL.

Configuration file:	NAMES.ORA
Default value:	names
OK to change?	yes
Range of values:	valid directory



Examples: See your Oracle platform-specific documentation.

NAMES.TRACE_UNIQUE

This parameter determines whether or not a unique trace file is created for each Names server. By default, the value is OFF, and only one trace file is created for a Names server. If the value is OFF, when a new trace file is created for a Names server, it overwrites the existing file. If the value is set to ON, a process identifier is appended to the name of each trace file generated so that several can coexist. The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform. For example, on a UNIX machine the format would be similar to the following:



```
SERVERA_3123.TRC
```

Note: Trace files are usually very large. If this parameter is set to ON, the number of large trace files created could interfere with the efficiency of your machine. Therefore, use it carefully.

NAMES.LOG_FILE

This parameter controls the log file name for an Oracle server. By default the log file generated is called SQLNET.LOG. Log files always append new information to the end of the existing log until the administrator prunes the log file.

Note: On most operating systems, TNS appends the .LOG suffix to the log file name, so there is no need to specify it in the configuration file.

Configuration file:	NAMES.ORA
Default value:	NAMES.LOG

OK to change?	yes
Ranges of values:	valid filename

Example:

`NAMES.LOG_FILE = names_server2`

This example generates a log file called NAMES_SERVER2.

NAMES.LOG_
DIRECTORY

This parameter is used to override the placement of the log output file for a Names server. The default location is specific to each operating system.

Configuration file:	NAMES.ORA
Default value:	See your Oracle operating system documentation.

OK to change?	yes
Range of values:	valid directory

Example: See your Oracle operating system documentation.



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NAMESCTL Utility Trace Parameter Descriptions

NAMESCTL.TRACE_
LEVEL

This parameter indicates the level at which the NAMESCTL program should be traced. It should only be used if NAMESCTL is suspected of causing problems.

Configuration file:	SQLNET.ORA
Default value:	OFF
OK to change?	yes
Ranges of values:	[OFF USER ADMIN]

OFF = No user specified tracing. This value can be used to disable trace.

USER = End-user level: Trace to provide additional information to identify user induced error conditions such as:

- addressing errors
- server installation errors
- runtime show-stopper errors (for example, protocol stack not loaded)

ADMIN = Administrator level: Trace to identify installation specific problems, for substantiation of

"finger pointing" in case of third party stacks, and for the following situations:

- site configuration-specific failures (for example, look-up files)
- protocol specific errors
- configuration inconsistencies
- server installation errors
- errors in interaction with third party software

NAMESCTL.TRACE_ FILE

This parameter generates the file in which the NAMESCTL trace output is placed. Note that for each trace session a trace output file is generated. On most operating systems, each trace file appends the process identifier of the current process to the filename so that previous files are not overwritten (if NAMESCTL.TRACE_UNIQUE is set to ON). The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform.

Note: On most operating systems, TNS appends the .TRC suffix to the trace file name, so there is no need to specify it in the configuration file.

Configuration file:	SQLNET.ORA
Default value:	namesctl
OK to change?	yes
Ranges of values	valid filename



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Example:

```
NAMESCTL.TRACE_FILE = NC.TRC  
NAMESCTL.TRACE_UNIQUE = TRUE
```

On a UNIX machine, this example might generate a trace file called NC.TRC.

NAMESCTL.TRACE_ DIRECTORY

This parameter indicates the directory where trace output from the NAMESCTL utility is placed. The default value is specific to each operating system.

Configuration file:	SQLNET.ORA
Default value:	none
OK to change?	yes
Range of values:	valid directory
Example:	/tmp/trace



OS Doc

NAMESCTL.TRACE_ UNIQUE



OS Doc

This parameter determines whether or not a unique trace file is created for NAMESCTL. By default, the value is OFF, and only one trace file is created for NAMESCTL. If the value is OFF, when a new trace file is created for NAMESCTL, it overwrites the existing file. If the value is set to ON, a process identifier is appended to the name of each trace file generated so that several can coexist. The format of the appended process identifier is platform specific and is described in the Oracle operating system-specific manual for your platform. For example, on a UNIX machine the format would be similar to the following:

`SERVERA_3123.TRC`

You must set the NAMESCTL_TRACE_UNIQUE parameter from the SQLNET.ORA configuration file. You cannot set it from NAMESCTL.

Note: Trace files are usually very large. If this parameter is set to ON (or TRUE), many trace files accumulate which takes up a lot of disk space, and may interfere with machine performance. Therefore use it carefully.

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