

Oracle® Diagnostics Pack

Release Notes

Release 2.1.0 for Windows 95, Windows 98, and Windows NT

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Table of Contents

- [1. Introduction](#)
- [2. Configuration and Compatibility](#)
- [3. Documentation and Help](#)
- [4. Oracle Performance Manager](#)
- [5. Oracle Capacity Planner](#)
- [6. Oracle Trace](#)
- [7. Oracle Advanced Events](#)
- [8. Oracle TopSessions](#)
- [9. General Information](#)

1 Introduction

1.1 Purpose of this Document

This document notes differences between the delivered Oracle Diagnostics Pack **2.1.0.0.0** product and its documented functionality. It also includes information on the Oracle Diagnostics Pack documentation, and late-breaking information concerning this production release.

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2 Configuration and Compatibility

2.1 Configuration

The Performance Manager and Capacity Planner are dependent upon the Oracle Data Gatherer being installed and running. The Oracle Data Gatherer is installed as part of the Oracle Intelligent Agent software. For more information, see the *Oracle Intelligent Agent User's Guide*.

2.2 Oracle Database Compatibility Matrix

The following matrix lists the compatibility of the Oracle Diagnostics Pack Release **2.1.0.0.0** with specific releases of the Oracle Server. If a component is certified to run with a specific server release, then a "yes" is placed for that entry.

Feature	Oracle Server Release		
	7.3.4	8.0.x	8.1.x
Oracle Diagnostics Pack	Yes	Yes	Yes

Note: Oracle Trace Manager requires Oracle Server Release 7.3.4 or later. Oracle Capacity Planner and Oracle Performance Manager require the Oracle Intelligent Agent/Data Gatherer Release 8.0.4.1 or later in order to collect historical and performance data for a selected service. The Oracle Intelligent Agent/Data Gatherer may be used to monitor systems running Oracle Server Release 7.3.4 or later.

3 Documentation and Help

3.1 Online Documentation

The Oracle Enterprise Manager products provide online documentation in HTML format. To view the online documentation, select **Programs** => **YOUR_ORACLE_HOME** => **Diagnostics Pack** => **Documentation** on the Windows NT **Start** menu after you install the Oracle Diagnostics Pack.

3.2 Online Help

The Oracle Enterprise Manager products provide online context-sensitive help. You can access online help for a product in multiple ways:

- Use the **Help** menu.

The Contents page lists the major help topics by title. The Index page lists topics by keywords. To find all of the help topics that contain a particular word, search for the word using the Find page (for Windows applications) or by using the Help Search page for the Java applications (Oracle Capacity Planner and Oracle Performance Manager). To display the Help Search page, choose the Search option on the Oracle Help for Java help system's Tools menu.

Note regarding the Java help system: When you double-click on a topic on the help system's Contents page, the topic is displayed in the help system's Help Topic window, which is normal behavior. However, if the topic you are viewing occurs in more than one place in the Contents page tree, the lowest occurrence of the topic in the tree is automatically opened and highlighted on the Contents page.

- Click the mouse on your specific area of interest, then press the **F1** key.
- If you want help on a particular dialog box, press its **Help** button.

4 Oracle Performance Manager

4.1 Memory Requirements for Chart Groups

Displaying of large chart groups or large number of individual charts (more than 15 at a time) is not recommended on systems having less than 48 MB of memory.

4.2 Viewing the Chart Legend

If the chart window is not large enough to display the chart, only the legend will appear in the chart. Resize the window to view the data.

4.3 Adding Services at Runtime

Services added at runtime are not saved. Any service added to the navigator at runtime is only visible in the navigator during that session. To make the service available for future sessions, it must be added to the Oracle Enterprise Manager discovery cache through the console.

4.4 Collecting Disk Statistics

In order to collect disk statistics for a Windows NT host, you must enable disk statistics collection on Windows NT before using Performance Manager or Capacity Planner. This is done by typing the following command on the host to be monitored:

```
diskperf -Y
```

Disk statistics will then be enabled the next time the system is restarted.

4.5 Drilling Down from User-Defined Charts

User-defined charts in do not support a drilldown to another chart.

4.6 Memory Used When Opening and Closing Charts

There is a known memory leak each time a chart is displayed and dismissed which will require a restart of the tool in order to release memory used by the monitor.

4.7 Limitation When Using the Create Like Feature

If the create-like feature is used to copy a user-defined chart from one database to another, and the query uses "select *", and the target database has a different number of columns, then an unhandled `ArrayIndexOutOfBoundsException` will occur.

4.8 Credentials Reset When Connecting to a Database

If an error occurs while attempting to connect to a target (other than a database), the credentials fields in the logon dialog are reset to their default values.

4.9 No Confirmation When Killing a Session from Locks Chart

When killing a session from the lock chart no confirmation dialog is displayed, but the session is killed immediately.

5 Oracle Capacity Planner

5.1 Caveats

5.2 Maximum Number of Data Sets Per Chart

The maximum number of data sets (lines) that can be included in a chart is 50. It is not possible to display more than 50 data sets in a single analysis. This includes selected sources/items and their trend analysis (extrapolation) fits.

5.3 Memory Used When Displaying

There is currently a memory leak for each analysis chart shown. Therefore, you should exit and restart Capacity Planner from time to time, if a large number of analyses are shown in a single session.

5.4 Performing Trend Analysis to Past Date

There is no warning or error displayed for cases where a trend analysis to value calculates a date in the past.

5.5 Refreshing Analysis Data After Loader Pass

No automatic refresh of analysis data during load passes: Once attached to a Capacity Planner database, there is no automatic refresh of the data available in the database navigator once loads have occurred. It is necessary to disconnect and reconnect to the database to refresh this view.

5.6 Services Added at Runtime are Not Saved

Services added at runtime are not saved. Any service added to the navigator at runtime is only visible in the navigator during that session. To make the service available for future sessions, it must be added to the Oracle Enterprise Manager discovery cache through the console.

5.7 Excluding or Removing Lines Not Saved with Chart

The removal of lines or exclusion of points from a Capacity Planner Analysis is not saved as part of that analysis.

5.8 Memory Used When Connecting and Disconnecting from Service

There is a memory leak when connecting and then disconnecting from a target. It is necessary to exit and restart Capacity Planner from time to time, if a large number of connections have been made in a single session.

5.9 Default Date for Predefined Analyses

For a pre-defined analysis, there is no way to change the default date selection of 1month of hourly data.

5.10 Removing Lines from Multiple Data Sources

If a chart contains multiple data sources and you remove a line for one of the data sources, the line for that data item is removed from all other data sources included in the chart.

5.11 No Help for Charts in Analysis Mode

When creating or viewing charts in Capacity Planner analysis mode, descriptions of the items are not available. This information is currently obtained from the data gatherer and no connection to the data gatherer exists when in this mode.

5.12 Upgrading from Windows NT to Windows 2000

If you are collecting physical disk data for a system and then you upgrade that system from Windows NT to Windows 2000, the collection of physical disk data will fail. This is because the upgrade changes the names of any physical disks on the system. Prior to upgrading to Windows 2000, stop any physical disk collections. After the upgrade has been completed, the collections can be restarted.

5.13 Defining the Browser for Chart Reports

By default, html reports are displayed using the default browser on your computer. If the VtdHTMLViewer property (in the file vtdclient.properties) is defined but has no value, HTML reports are displayed by an HTML viewer provided with the Oracle Diagnostics Pack. To specify another HTML viewer, set this property to the name of a browser program. You must specify a complete file specification if the .exe file is not in your PATH and path separators must be entered as \\.

Example:

```
/options/VtdHTMLViewer=D:\\ProgramFiles\\Communicator\\Program\\netscape.exe
```

5.14 Compatibility

Capacity Planning Database Compatibility with Different Data Gatherer Versions:

- If a Capacity Planning database was initially created by an later Data Gatherer version, it will not be possible for an earlier Data Gatherer version to store data in that database.
- If, however, the database was initially created by an earlier Data Gatherer, all later versions may store data in that database.

6 Oracle Trace

This section covers the Oracle Trace collection services (shipped with the Oracle Server), the Oracle Trace Manager application and the Oracle Trace Data Viewer application.

6.1 General Information

6.1.1 Using the Oracle Trace Documentation to Troubleshoot Problems The *Oracle Trace Users Guide* contains a section to help you identify and correct common Oracle Trace configuration problems; see Appendix C Troubleshooting Oracle Trace.

6.1.2 Collecting Data for Oracle 8 and Oracle 8i Databases In order to use Oracle Trace to collect data for an Oracle8 or Oracle 8i database, you must set the value of the ORACLE_TRACE_ENABLE parameter in your init<sid>.ora to TRUE.

6.1.3 Collecting Data for Oracle 7.3.3 Servers When a collection is started for an Oracle 7.3.3 server, data is collected only for those users who are logged in at the time the collection is started. Users who log in after the collection has started are not included as part of the collection. This restriction does not apply to Oracle8.

6.1.4 Using Oracle Trace Administrative Data Files On Windows NT, the Oracle Trace administrative data files (otrace\admin*.dat) are unable to extend at run-time beyond their initial number of records. The default number of records on NT for each of these files is as follows: collect.dat (36 records), facility.dat (5,000 records), and regid.dat (5,000 records).

Each active Oracle Trace collection uses 3 collect.dat records; each process and thread that participates in the collection (e.g., database processes/threads in the case of a DB collection) will use one facility.dat record and (at least) one regid.dat record. The default initial admin dat file sizes should be sufficient in most situations; but depending on the anticipated level of Oracle Trace use, it may be necessary to extend these files before Oracle Trace use via the otrccref utility described below.

If one of these Oracle Trace admin dat files should be filled, a subsequent attempt to add a new record (for example when starting a new collection) will result in a "file full" error in an NT 7.3.x environment, or for an NT 8.x environment an EPC-00020 "Oracle Trace cannot access memory" error (since these files are memory mapped on NT).

If this error occurs, running the Oracle Trace otrccref utility, found in Oracle_home\bin, will create a new (empty) set of the admin dat files, with the option of specifying a larger number of records for any of them. (Note: the Oracle database will attach to and map these files, and so must be shut down for otrccref to create new files.) The otrccref command line usage is as follows:

```
> otrccref [-c#] [-f#] [-r#]
```

with the optional qualifiers used as follows:

-c# to set the initial number (#) of collect.dat records

-f# to set the initial number (#) of facility.dat records

-r# to set the initial number (#) of regid.dat records

For example:

> otrccref -c50 -r6000

Note: The minimum number of records that may be specified for any file is 32.

6.1.5 Location of .fdf Files The directory, `$ORACLE_HOME/otrace/admin/fdf`, should only contain files with the `.fdf` extension.

6.1.6 Using Older Versions of the Oracle Trace Formatter Utility Starting with Oracle Trace 7.3.4 and 8.0.4, additional columns were added to the Oracle Trace formatted collection event tables, for example for elapsed time per duration event. Any existing older formatter tables will be upgraded automatically. However, use of an Oracle Trace formatter utility from a release earlier than 7.3.4 and 8.0.4 with this newer format table definition can result in format failures; it's recommended that if older release formatter utilities must be used, then their output not be directed to a database schema which is also used to contain newer formatted data.

6.1.7 Circular Data File Mode of Data Collection For Oracle Trace 8.1.6, support was added for a "circular data file" mode of data collection. When operating in this mode the collection's data file (which contains recorded event data) does not continue to grow indefinitely; instead at most only a specified amount of data will be retained, with the oldest data discarded as needed once that maximum size has been reached.

If an OTrace collection is created using the OEM Trace Manager graphical user interface (as of OEM 2.1) the circular data file mode may be selected and a limit specified for the maximum amount of data to be retained. The amount of collection data retained for later formatting and analysis will not exceed that specified maximum.

The same holds true if the OTrace 816 command line interface is used to start and stop data collection, except that total data retained may be as much as twice the size specified in the `max_cdf` (i.e. maximum collection file size) parameter. For example if a 1 MB limit is set on the collection data file (e.g. `mycoll.dat`), when it grows to 1 MB it will be renamed `mycoll.sav` and a new `mycoll.dat` created to contain subsequent OTrace event data. This process continues indefinitely with older `mycoll.sav` files being deleted as necessary; the result is that up to the most recent 2 MB of OTrace event data is available for format and analysis. (The difference between CLI and GUI handling of the maximum circular data file size is that the GUI divides the specified maximum size of `n` MB into `n/2` MB for the `dat` file plus another `n/2` MB for any `sav` file, for the requested total of `n` MB of collected data.)

Whether CLI or Trace Manager GUI is used to run a collection in the circular data file mode, no special action is required to format this data to an Oracle database. The same format commands apply, as for normal collection mode.

6.1.8 Cannot Format Trace Data to a Schema With Hyphen You cannot format Trace data to a schema name that contains a hyphen. If attempted an OCI error occurs.

6.2 Oracle Trace Manager Caveats

6.2.1 Collecting Data for Oracle 7.3.3 Servers In order to use the Oracle Trace Manager application to collect data for an Oracle 7.3.3 server, the Oracle Tcl job scripts located in the 7.3.3 Oracle home must be replaced. If you want to use Oracle Trace Manager for this configuration, please contact Oracle support to receive an updated set of Oracle Trace Tcl job scripts to replace those located in:

```
$ORACLE_HOME/network/agent/jobs/oracle/otrace/general
```

6.2.2 Discovering Products in an Oracle 8 or Oracle 8i Home If using Oracle Trace Manager to discover products in an Oracle8 or Oracle 8i oracle_home, note that the SQL*Net product definition file (the file describing what to collect) has been removed for Oracle 8.0.3 (and higher) server releases. Therefore, the Oracle Trace Manager does not discover SQL*Net products for Oracle8 or higher releases.

6.2.3 Displaying the Proper Service Name in Formatter Databases Drop-Down List If a database appears in the dropdown list of formatter databases in the form *host:port:sid* (and the database is not version 8.1.6 or greater), then discover the database through the Enterprise Manager console. The database will then be discovered with its normal service name.

6.2.4 Failed to Format Collection Error When Collecting 8.1.6. Server Data

The following problem exists for collections against 8.1.6 databases.

If you collect data for any of the following events:

- Connect_Disconnect
- CACHEIO
- SQL_Text_Only
- SUMMARY
- Wait_Events

And then you try to format this data to a schema that does NOT contain data from any of the following events:

- SQL_Txns_and_Stats
- ALL, DEFAULT
- EXPERT
- SQL_and_Wait_Stats
- SQL_Stats_and_Plan

Then the formatting will appear to fail and you will see an error dialog in Trace Manager. However, the format has failed only in a post-processing step. Therefore, the workaround is to launch Trace Dataviewer in standalone mode and connect to that formatted schema. Trace Dataviewer will correctly complete the post-processing step in the format.

6.3 Oracle Trace Data Viewer: Caveats

6.3.1 Collecting Data for Oracle 8 and Oracle 8i Servers As noted in 6.1.2; in order to collect and view Oracle Trace data for Oracle8 or Oracle 8i databases, you must set the value of the ORACLE_TRACE_ENABLE parameter in your init<sid>.ora to TRUE.

6.3.2 Collecting Wait Event Time Statistics In order for WAIT event time statistics to be collected and presented in the Oracle Trace Data Viewer, you must enable the "timed_statistics" parameter for your instance. This is a dynamic parameter that can be enabled from Oracle Enterprise Manager Instance Manager without re-starting the instance.

6.3.3 Privileges Required to Create Tables, Indexes, Stored Procedures, and Functions The Oracle Trace Data Viewer user must have database privileges to create tables, indexes, stored procedures, and functions.

6.3.4 CPU Statistics for Sun OS Databases CPU statistics may not be present in Oracle Server 7.3.3 collections on SUN OS databases.

6.3.5 SELECT_ANY_TABLE Privilege Required As of version 2.0.4, the Trace Data Viewer requires the SELECT_ANY_TABLE SYSTEM privilege in addition to the privileges listed in Appendix C of the *Oracle Trace User's Guide*.

6.3.6 Using 1.x and 2.x Repositories If you have both versions 1.x and 2.x of Trace Data Viewer installed in separate homes on the same system, you cannot create both 1.x and 2.x repositories in the same schema. If you

attempt to create a 1.x repository in a 2.x repository schema, you will encounter errors.

6.4 Oracle Trace Data Viewer: Known Problems

6.4.1 Invalid Data Collected Invalid statistics can usually be detected by either negative values or seemingly random very large values. Note that if you use a Data View that sorts by one of the invalid statistics the results are misleading. If you believe that the statistics you are viewing are not "good", either choose a different data view that sorts by a non-corrupt statistic or modify the selected data view to display and sort by valid statistics.

6.4.2 Invalid CPU Statistics in Oracle Server 8.0.5 Collections The CPU statistics that are collected in the Oracle Trace binary data file are valid. The values are corrupted during Trace formatting. Replacing the 8.0.5 formatter (\$ORACLE_HOME\bin\otrcfmt.exe for target database) with an 8.0.4 formatter fixes the problem

Note: You can view the valid CPU values with the Oracle Trace Statistics Reporting Utility. Options and information on the reporting utility are available in Appendix A of the *Oracle Trace User's Guide*.

6.4.3 6.4.1.2 Invalid Resource Utilization Statistics in Oracle Server for NT pre-8.0.5 collections The following resource utilization statistical values are not initialized and not set - therefore they are random values:

- CPU - both user mode and system mode CPU statistics
- Input_IO
- Output_IO
- Pagefaults
- Pagefault_IO
- Max_resident_set_size

Note: Using Data Viewer data views that sort by invalid resource utilization statistics (i.e.: CPU Consumption) will produce misleading results. Data views can be modified to display and/or sort by other statistics. Modified data views are saved to the "Custom" data view folder.

6.4.4 Table or View Does Not Exist (or No Data in Collection) error. When a record is not written to the EPC_FACILITY_REGISTRATION table in the collection's formatted data, the user may see an error like the following:

```
XP-21016: A database error has occurred:  
SELECT DISTINCT FACILITY_NUMBER, FACILITY_VERSION, VENDOR  
FROM EPC_FACILITY_REGISTRATION WHERE COLLECTION_ID = :1  
ORA-00942: table or view does not exist
```

Removing the 'Filtering by User' option on collections targeting Oracle Server release 8.0.4 databases will correct this problem for future collections.

See the *Oracle Trace Users Guide* Appendix C, Troubleshooting Guide for information on how to manually add an EPC_FACILITY_REGISTRATION record for the collection. Details are in the Trace Data Viewer section under the "Table or View Does Not Exist (or No Data in Collection)" topic.

6.4.5 Database Connection Error When Viewing Formmated Data If you get the following error when Viewing Formatted Data from the Trace manager:

```
XP-21162: Database connection attempt failed  
ORA-12154: TNS could not resolve service name
```

In the Enterprise Manager Console, choose "Add Services to tnsnames.ora" from the "System" menu. Previous versions of Enterprise Manager updated your tnsnames.ora file automatically upon discovery of a node. Now you must update the file manually by selecting this command.

7 Oracle Advanced Events

7.1 Warning Trag Triggered by SysStat, SysStat Delta, and User-Defined SQL Events

SysStat Event, SysStat Delta Event and the **User-Defined SQL Event** can sometimes trigger a warning flag with the output message "integer value too large to represent". This is due to the fact that some of the statistics checked for these events can have values that are larger than what can be represented by a signed integer (bug #637664).

7.2 Using the Swap Event and Paging Event

Swap event does not distinguish between swap in/out. The **Paging Event** monitors the total value of swap ins / outs cumulatively. It does not distinguish between the two values. (Bug 739646)

7.3 Disk Full Event Does Not Accept Wildcards

Disk Full event does not accept wildcards or more than one path specification. Users cannot enter * to indicate all disks on the node as a parameter for the Disk Full event. This is an enhancement request. (Bug 752982)

7.4 Important Note Regarding Advanced Events

Some advanced events are affected by the number of segments, datafiles, tablespaces, and extents in your database. These events include:

- chunk small
- Fast Segment Growth
- Maximum Extents
- Multiple Extents
- Tablespace Full
- Continued Row
- Index rebuild

For the events listed above, it is recommended that you reduce the number of objects referenced in the event you are registering. So, in the example of the Maximum Extents event, rather than using the default of '*' or all segments, you could limit the event to cover the most important segments you need to monitor.

7.5 Registering Events Against Multiple Objects

When registering an event against multiple objects, such as the Maximum Extents event against 5 objects, the event will trigger when any one of the objects crosses the event thresholds. However, if another object subsequently crosses the event threshold, the event will not retrigger. (Bug 738833)

8 Oracle TopSessions

8.1 Short Automatic Refresh Interval Causes Continuous Loop

If the TopSessions automatic refresh interval is shorter than the time it takes to do a refresh, TopSessions will thrash in a continuous loop. To break the loop, click on the "Refresh Mode" button on the toolbar to toggle back to the manual refresh mode.

8.2 More About Using Automatic Refresh Intervals

Do not leave TopSessions on auto-refresh with very short refresh intervals (under 20 seconds) for extended periods of time (several hours). Doing so may cause excessive system resource usage.

9 General Information

9.1 Installing Oracle Server 8.1.5 After Oracle Enterprise Manager 2.1.0

If you install Enterprise Manager version 2.1 and then subsequently install Oracle Server version 8.1.5 on the same machine, the 8.1.5 installation will downgrade the installed version of your JRE. This may cause the Oracle Diagnostics Pack to behave incorrectly. To double-check this, make sure you are running JRE version 1.1.7.24. (Bug 1160500)

9.2 Installing on a Dual Boot System

If you are on a dual boot system and have already installed products using the Oracle Universal Installer (OUI) in one environment, then in the second environment when asked where to write the OUI inventory provide a different location than the default. The second environment inventory will then be independent of the first, products can be installed/deinstalled separately on both systems.

9.3 Installing Enterprise Manager 2.0 After Installing Enterprise Manager 2.1

If after installing Enterprise Manager or Management Packs Release 2.1 you install Enterprise Manager or Management Packs Release 2.0, the JRE (Java Runtime Environment) installed as part of Release 2.1 will be downgraded automatically; no error messages will appear.

This downgrade from JRE Release 1.1.7.24 to JRE Release 1.1.7.50 will cause problems for Enterprise Manager Release 2.1. Consequently, do not install Enterprise Manager Release 2.0 after installing Enterprise Manager Release 2.1.

However, if you run into this situation, you can work around the problem by re-installing JRE Release 1.1.7.240 from the CD-ROM you installed Enterprise Manager Release 2.1 (most likely from a Release 8.1.6 CD-ROM).

Re-install the JRE by re-installing Oracle Universal Installer; as the Installer has a dependency on the JRE.

