

HiCommand® Tuning Manager Application Reports Reference

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Document Revision Level

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MK-95HC113-P	December 2005	Preliminary Release
MK-95HC113-00	June 2006	Initial release, supersedes and replaces MK-95HC113-P
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Preface

The *HiCommand® Tuning Manager Application Reports Reference* describes the functions of collecting and managing performance data. It is intended for system/account administrators who have a basic knowledge of both SANs (Storage Area Networks) and NAS (Network Attached Storage) and who are responsible for:

- Store database management
- Backup and disk management
- Cluster system set up and maintenance
- Data collection (system configuration detail records, log information, and workgroup information)

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Software Version

This document revision applies to software version 5.5.

Conventions for Storage Capacity Values

Storage capacity values displayed by HiCommand Tuning Manager are calculated based on the following values:

- 1 KB (kilobyte) = 1,024 bytes
- 1 MB (megabyte) = 1,024² bytes
- 1 GB (gigabyte) = 1,024³ bytes
- 1 TB (terabyte) = 1,024⁴ bytes

Referenced Documents

- *HiCommand Tuning Manager Agent Administration Guide*, MK-92HC013
- *HiCommand Tuning Manager Server Administration Guide*, MK-92HC021
- *HiCommand Tuning Manager User's Guide*, MK-92HC022
- *HiCommand Tuning Manager Hardware Reports Reference*, MK-95HC111
- *HiCommand Tuning Manager Operating System Reports Reference*, MK-95HC112
- *HiCommand Tuning Manager Messages Reference*, MK-95HC114
- *HiCommand Tuning Manager Command Line Interface Guide*, MK-96HC119
- *HiCommand Tuning Manager Installation Guide*, MK-96HC141

Readme and Release Notes Contents

These files can be found on the installation CD. They contain requirements and notes for use of HiCommand Tuning Manager that may not be fully described in the manual. Be sure to review these files before installing HiCommand Tuning Manager.

Comments

Please send us your comments on this document. Make sure to include the document title, number, and revision. Please refer to specific section(s) and paragraph(s) whenever possible.

- E-mail: doc.comments@hds.com
- Fax: 858-695-1186
- Mail:
Technical Writing, M/S 35-10
Hitachi Data Systems
10277 Scripps Ranch Blvd.
San Diego, CA 92131

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Chapter 1 Working with the Solution Set

This chapter describes alarms and reports that an Agent provides as part of a solution set. A solution set makes it easy for the user to set alarms and reports.

- Overview of the Solution Set (see section 1.1)
- Reviewing the Format of Alarm Explanations (see section 1.2)
- Agent for Oracle® Alarms (see section 1.3)
- Agent for Microsoft® SQL Server® Alarms (see section 1.4)
- Agent for Microsoft Exchange Server Alarms (see section 1.5)
- Agent for DB2® Alarms (see section 1.6)
- Reviewing the Format of Report Explanations (see section 1.7)
- Reviewing the Organization of Report Folders (see section 1.8)
- Agent for Oracle Reports (see section 1.9)
- Agent for Microsoft SQL Server Reports (see section 1.10)
- Agent for Microsoft Exchange Server Reports (see section 1.11)
- Agent for DB2 Reports (see section 1.12)

1.1 Overview of the Solution Set

The Tuning Manager series programs enable you to define alarms and reports by the following methods:

- Use the default alarms and reports provided by an Agent.
- Customize the default alarms and reports provided by an Agent.
- Define new alarms and reports.

The alarms and reports provided by an Agent constitute a **solution set**. Because all required information is already defined for alarms and reports in the solution set, you can use them as they are or customize them as appropriate for your environment. Therefore, this enables you to complete the preparations for monitoring the operating status of a desired program without having to define new alarms and reports.

For details about how to use reports, see the *HiCommand[®] Tuning Manager User's Guide*. For details about how to use alarms, see the *HiCommand Tuning Manager Agent Administration Guide*.

1.2 Reviewing the Format of Alarm Explanations

This section describes the format that is used to explain alarms. This manual lists the alarms in alphabetical order.

Overview

Provides an overview of what can be monitored by the alarm.

Main Settings

Provides a table that lists and describes the main settings for the alarm. This table shows the correspondence between these alarm settings and the setting items for the alarm definition information output by the `jpcaalarm export` command. For details about the settings for each alarm, check the alarm definition information output by the `jpcaalarm export` command.

Two hyphens (--) in the Setting column indicate that the setting is normally disabled.

If the same value is set as the conditional expression for both the abnormal and warning conditions, only abnormal error alarms are issued.

1.3 Agent for Oracle Alarms

Alarms defined in the Agent for Oracle solution set are listed in the alarm table **PFM Oracle Solution Alarms 8.00**. 8.00 indicates the version of the alarm table. Table 1.1 lists and describes the alarms defined in this solution set:

Table 1.1 Agent for Oracle Alarms

Name of Alarm	What Is Monitored
Buffer Cache Usage	Buffer cache hit rate
Buffer Cache Waits	Contention of data in databases and rollback block contention
Dict. Cache Usage	Shared pool
Disk Sorts	In all sorting operations, percentage of sorting operations executed on the disk when memory and disk I/O operations are used
Free List Waits	Free list contention
Full Table Scans	Percentage of search all
Library Cache Usage	Library cache
Listener Status	Listener process operation
Redo Log Contention	Log buffer size
Server Status	Oracle instance operations
Tablespace Usage	Free table space

1.3.1 Buffer Cache Usage

Overview

The Buffer Cache Usage alarm monitors the buffer cache usage rate.

Main Settings

Table 1.2 Main Settings for the Buffer Cache Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	<code>PI_CACHE_HIT_PERCENTAGE < 85</code>
		Warning condition	<code>PI_CACHE_HIT_PERCENTAGE < 95</code>

1.3.2 Buffer Cache Waits

Overview

The Buffer Cache Waits alarm monitors the contention of data in databases and rollback block contention.

Main Settings

Table 1.3 Main Settings for the Buffer Cache Waits Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_BUFFER_BUSY_WAIT_PERCENTAGE > 5
		Warning condition	PI_BUFFER_BUSY_WAIT_PERCENTAGE > 3

1.3.3 Dict. Cache Usage

Overview

The Dict. Cache Usage alarm monitors shared pools.

Main Settings

Table 1.4 Main Settings for the Dict. Cache Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_DICTIONARY_CACHE_GET_MISSES_PERCENTAGE > 15
		Warning condition	PI_DICTIONARY_CACHE_GET_MISSES_PERCENTAGE > 10

1.3.4 Disk Sorts

Overview

For all sorting operations, the Disk Sorts alarm monitors the percentage of sorting operations executed on the disk when memory and disk I/O operations are used.

This alarm may occur when only the Agent for Oracle is using Oracle Database and no other application is running. If this alarm always occurs in such a condition, increasing the value of `SORT_AREA_SIZE` (or the value of `SORT_AREA_RETAINED_SIZE` if it is set) can stop the alarm from occurring. The guideline for the value is 204,800. If you change this setting, restart Oracle Database to apply the new setting.

Main Settings

Table 1.5 Main Settings for the Disk Sorts Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	<code>PI_SORT_OVERFLOW_PERCENTAGE > 15</code>
		Warning condition	<code>PI_SORT_OVERFLOW_PERCENTAGE > 10</code>

1.3.5 Free List Waits

Overview

The Free List Waits alarm monitors free list contention.

Main Settings

Table 1.6 Main Settings for the Free List Waits Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_FREE_LIST_WAIT_EVENTS > 2
		Warning condition	PI_FREE_LIST_WAIT_EVENTS > 1

1.3.6 Full Table Scans

Overview

The Full Table Scans alarm monitors the percentage of search all operations.

Main Settings

Table 1.7 Main Settings for the Full Table Scans Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_NON_INDEX_LOOKUPS > 10
		Warning condition	PI_NON_INDEX_LOOKUPS > 5

1.3.7 Library Cache Usage

Overview

The Library Cache Usage alarm monitors the library cache.

Main Settings

Table 1.8 Main Settings for the Library Cache Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_LIBRARY_CACHE_MISS_PERCENTAGE > 2
		Warning condition	PI_LIBRARY_CACHE_MISS_PERCENTAGE > 1

1.3.8 Listener Status

Overview

The Listener Status alarm monitors the listener process operation.

Main Settings

Table 1.9 Main Settings for the Listener Status Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_PDLs_AVAILABILITY = 0
		Warning condition	PD_PDLs_AVAILABILITY = 0

1.3.9 Redo Log Contention

Overview

The Redo Log Contention alarm monitors the log buffer.

Main Settings

Table 1.10 Main Settings for the Redo Log Contention Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_REDO_LOG_SPACE_REQUESTS > 2
		Warning condition	PI_REDO_LOG_SPACE_REQUESTS > 1

1.3.10 Server Status

Overview

The Server Status alarm monitors Oracle instance operations.

Main Settings

Table 1.11 Main Settings for the Server Status Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_STAT_AVAILABILITY = 0
		Warning condition	PD_STAT_AVAILABILITY = 0

1.3.11 Tablespace Usage

Overview

The Tablespace Usage alarm monitors the free table space.

Main Settings

Table 1.12 Main Settings for the Tablespace Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_PDTS_PERCENT_FREE < 10
		Warning condition	PD_PDTS_PERCENT_FREE < 20

1.4 Agent for Microsoft SQL Server Alarms

Alarms defined in the Agent for Microsoft SQL Server solution set are listed in the alarm table **PFM SQL Solution Alarms 8.00**. 8.00 indicates the version of the alarm table. Table 1.13 lists and describes the alarms that are defined in this solution set:

Table 1.13 Agent for Microsoft SQL Server Alarms

Name of Alarm	What Is Monitored
Blocked Sessions	Number of sessions waiting for a lock to be released by another session
Cache Usage	Percentage of requests found in the data cache as opposed to being read from the disk
CPU Usage	Current top 10 sessions in CPU cycle consumption
Database Space	Space usage status in each database on Microsoft SQL Server
Log Space Usage	Top 10 databases in log space consumption
Network Error	Effects of Microsoft SQL Server on network

1.4.1 Blocked Sessions

Overview

The Blocked Sessions alarm monitors the number of sessions waiting for a lock to be released by another session.

Main Settings

Table 1.14 Main Settings for the Blocked Session Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_BLOCKED > 2
		Warning condition	PD_BLOCKED > 0

1.4.2 Cache Usage

Overview

The Cache Usage alarm monitors the percentage of requests found in the data cache as opposed to being read from disk.

Main Settings

Table 1.15 Main Settings for the Cache Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_SERV_CACHE_HIT_RATIO < 85
		Warning condition	PI_SERV_CACHE_HIT_RATIO < 95

1.4.3 CPU Usage

Overview

The CPU Usage alarm monitors the current top 10 sessions for CPU cycle consumption.

Main Settings

Table 1.16 Main Settings for the CPU Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_PERC_BUSY > 90
		Warning condition	PI_PERC_BUSY > 80

1.4.4 Database Space

Overview

The Database Space alarm monitors the space usage status in each database on Microsoft SQL Server.

Main Settings

Table 1.17 Main Settings for the Database Space Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_DS_PERC_FREE < 10
		Warning condition	PD_DS_PERC_FREE < 20

1.4.5 Log Space Usage

Overview

The Log Space Usage alarm monitors the top 10 databases for log space consumption.

Main Settings

Table 1.18 Main Settings for the Log Space Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	<code>PI_TLOG_LOG_SPACE_USED_PCT > 90</code>
		Warning condition	<code>PI_TLOG_LOG_SPACE_USED_PCT > 80</code>

1.4.6 Network Error

Overview

The Network Error alarm monitors effects of Microsoft SQL Server on the network.

Main Settings

Table 1.19 Main Settings for the Network Error Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_PACKET_ERRORS > 2
		Warning condition	PI_PACKET_ERRORS > 0

1.5 Agent for Microsoft Exchange Server Alarm

Alarms defined in the Agent for Microsoft Exchange Server solution set are listed in the alarm table **PFM MExchange Solution Alarms 8.00**. 8.00 indicates the version of the alarm table. The following table describes the alarm defined in this solution set.

Table 1.20 Agent for Microsoft Exchange Server Alarm

Name of Alarm	What Is Monitored
Log Threads Waiting	Number of threads that are waiting for data to be written to the log to complete updating of the database.

1.5.1 Log Threads Waiting

Overview

The Log Threads Waiting alarm monitors the number of threads that are waiting for data to be written to the log to complete updating of the database used by the information store.

Main Settings

Table 1.21 Main Settings for the Log Threads Waiting Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	<code>PI_DB_LOG_THREADS_WAITING > 20</code>
		Warning condition	<code>PI_DB_LOG_THREADS_WAITING > 10</code>

1.6 Agent for DB2 Alarms

Alarms defined in the Agent for DB2 solution set are listed in the alarm table **PFM DB2 Solution Alarms 8.00**. 8.00 indicates the version of the alarm table. Table 1.22 lists and describes the alarms that are defined in this solution set:

Table 1.22 Agent for DB2 Alarms

Name of Alarm	What Is Monitored
Cat Cache Hit Rate	Catalog cache hit rate
DB2 Status	Database manager activities
Pkg Cache Hit Rate	Package cache hit rate
Sort Memory Usage	Shared sort memory usage
Sort Overflow Rate	Sort overflow rate
Workspace Hit Rate	Shared work space hit rate

1.6.1 Cat Cache Hit Rate

Overview

The Cat Cache Hit Rate alarm monitors the catalog cache hit rate.

Main Settings

Table 1.23 Main Settings for the Cat Cache Hit Rate Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PI_DCAI_CATCACHE_HIT_RATE < 70 & PI_DCAI_CATCACHE_HIT_RATE <> 0
		Warning condition	PI_DCAI_CATCACHE_HIT_RATE < 80 & PI_DCAI_CATCACHE_HIT_RATE <> 0

1.6.2 DB2 Status

Overview

The DB2 Status alarm monitors the database manager to determine whether it is running normally.

Main Settings

Table 1.24 Main Settings for the DB2 Status Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_PD_DB2_STATUS = 100
		Warning condition	PD_PD_DB2_STATUS = 100

1.6.3 Pkg Cache Hit Rate

Overview

The Pkg Cache Hit Rate alarm monitors the package cache hit rate.

Main Settings

Table 1.25 Main Settings for the Pkg Cache Hit Rate Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	Y
	Damping Count	Interval	3
		Maximum occurrences	2
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	<code>PI_DCAI_PKG_CACHE_HIT_RATE < 70 & PI_DCAI_PKG_CACHE_HIT_RATE <> 0</code>
		Warning condition	<code>PI_DCAI_PKG_CACHE_HIT_RATE < 80 & PI_DCAI_PKG_CACHE_HIT_RATE <> 0</code>

1.6.4 Sort Memory Usage

Overview

The Sort Memory Usage alarm monitors the shared sort memory usage.

Main Settings

Table 1.26 Main Settings for the Sort Memory Usage Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_DSOD_SORT_SHRHEAP_ALLOCATED_RATE > 85
		Warning condition	PD_DSOD_SORT_SHRHEAP_ALLOCATED_RATE > 70

1.6.5 Sort Overflow Rate

Overview

The Sort Overflow Rate alarm monitors the sort overflow rate.

Main Settings

Table 1.27 Main Settings for the Sort Overflow Rate Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_DSOD_SORT_OVERFLOW_RATE > 50
		Warning condition	PD_DSOD_SORT_OVERFLOW_RATE > 30

1.6.6 Workspace Hit Rate

Overview

The Workspace Hit Rate alarm monitors the shared work space hit rate.

Main Settings

Table 1.28 Main Settings for the Workspace Hit Rate Alarm

Alarm definition output by the <code>jpcalarm export</code> command			Setting
Subsection	Label	Explanation	
Advanced Setting	Damping	Alarm when damping conditions are satisfied	N
	Damping Count	Interval	--
		Maximum occurrences	--
Actions	SNMP	SNMP	Abnormal, Warning, Normal
Alarm Condition Expressions	Condition	Abnormal condition	PD_DSQD_SHR_WORKSPACE_HIT_RATE < 70 & PD_DSQD_SHR_WORKSPACE_HIT_RATE <> 0
		Warning condition	PD_DSQD_SHR_WORKSPACE_HIT_RATE < 80 & PD_DSQD_SHR_WORKSPACE_HIT_RATE <> 0

1.7 Reviewing the Format of Report Explanations

This section describes the format that is used to explain reports. The manual lists the reports in alphabetical order.

Report Name

Indicates the report name of a solution set.

Agent for Oracle and Agent for Microsoft SQL Server:

- Reports with names that include (Multi-Agent) display information about multiple instances.
- Reports with names that do not include (Multi-Agent) display information about a single instance.

Agent for Oracle:

- Reports with names that include (5.0) indicate that the data model of the record used for the report is 5.0.
- Reports with names that include (4.0) indicate that the data model of the record used for the report is 4.0.
- Reports with names that do not include (5.0) or (4.0) indicate that the data model of the record used for the report is 3.0.

For details about data models, see section 2.1.

Overview

Provides an overview of the information that can be displayed in the report.

Storage Location

Indicates the storage location of the report.

Record

Indicates the record that contains the performance data (configuration information) used in the report. To display a historical report, you must specify information in advance in order to collect the record indicated in this column. Before you display a report, use the `jpcasrec output` command of Performance Reporter to confirm that the record indicated in this column is set as Log = Yes. For a real-time report, you do not need to set it. For details about the Performance Reporter command, see the *HiCommand Tuning Manager Command Line Interface Guide*.

Note: The maximum number of records that can be displayed in a report is set in advance. For details about how to change the maximum number of records that can be displayed, see the chapter that describes how to perform operations on reports in the *HiCommand Tuning Manager User's Guide*.

Report Data

This is a table that contains some or all of the following information:

- **Fields**
Describes the fields used in the report.
- **Drilldown Reports (Report Level)**
Lists other reports in the solution set that are related to this report. For details about how to display a drilldown report, see the chapter that describes the report operations in the *HiCommand Tuning Manager User's Guide*. **Note:** Some reports and Agents do not have any drilldown reports.
- **Drilldown Reports (Field Level)**
Describes reports in the solution set that are associated with fields used in this report. For details about how to display a drilldown report, see the chapter that describes the report operations in the *HiCommand Tuning Manager User's Guide*. **Note:** Some reports and Agents do not have any drilldown reports.

Note: If a report only contains one field and no drilldown reports, the field data is listed beneath the 'Field' heading.

1.8 Reviewing the Organization of Report Folders

Listed below is a description of each folder:

- **Monthly Trend folder**

This folder contains reports that display daily information for the past month. Use the reports in this folder to check monthly trends in the system.

- **Status Reporting folder**

This folder contains a report displaying information compiled on a day-to-day basis. Use this folder to check the overall status of the system. In addition, real-time reports as well as historical reports can be displayed.

- **Daily Trend folder**

This folder contains reports that display information for the last 24 hours, as well as hourly information for the past 24 hours. Use the reports in this folder to check the daily status of the system.

- **Real-Time folder**

This folder contains real-time reports for checking the current status of the system.

- **Troubleshooting folder**

This folder contains reports showing useful information for resolving problems. In the event of a system problem, use the reports in this folder to check the cause of the problem. In addition, real-time reports as well as historical reports can be displayed.

- **Real-Time folder**

This folder contains real-time reports for checking the current status of the monitored system.

- **Recent Past folder**

This folder contains historical reports showing the cumulative data every minute in the last hour.

Also, some of the folders might contain the following subordinate folders, depending on the folders above each:

- **Advanced folder**

This folder contains reports that use records for which Log = No is set by default. To display these reports, change the record setting to Log = Yes by using the `jpcasrec update` command of Performance Reporter.

- **Drilldown Only folder**

This folder contains reports that are displayed as drilldown reports (field level). Use it to display detailed information about the fields contained in the applicable report.

The following are examples of the organization of report folders for each Agent. Angle brackets (< >) enclose folder names.

1.8.1 Agent for Oracle

```
<Oracle>
+-- <Monthly Trend>
|   +-- Cache Usage Trend(Multi-Agent)
|   +-- Database Activity Trend(Multi-Agent)
|   +-- <Advanced>
|       +-- Database Space Trend(Multi-Agent)
|       +-- Datafile I/O Trend Summary(4.0)
|       +-- SGA Status Summary(5.0)
|       +-- <Drilldown Only>
|           +-- Datafile I/O Trend Detail(Reads) (4.0)
|           +-- Datafile I/O Trend Detail(Writes) (4.0)
+-- <Status Reporting>
|   +-- <Daily Trend>
|       +-- Cache Usage Status(Multi-Agent)
|       +-- Database Activity Status(Multi-Agent)
|       +-- <Advanced>
|           +-- Database Space Summary(Multi-Agent)
|           +-- Datafile I/O Status Summary(4.0)
|           +-- <Drilldown Only>
|               +-- Datafile I/O Status Detail(Reads) (4.0)
|               +-- Datafile I/O Status Detail(Writes) (4.0)
|   +-- <Real-Time>
|       +-- Database Activity Status(4.0)
|       +-- Database Space Overview(4.0)
|       +-- Server Configuration Status(4.0)
|       +-- SGA Status(5.0)
|       +-- System Overview(4.0)
|       +-- Tablespace Status(4.0)
|       +-- <Drilldown Only>
|           +-- Database Activity Status Detail(4.0)
|           +-- Tablespace Status Detail(4.0)
+-- <Troubleshooting>
|   +-- <Real-Time>
|       +-- Blocking Locks(4.0)
|       +-- Disk Sorts - Top 10 Sessions(4.0)
|       +-- I/O Activity - Top 10 Datafiles(4.0)
|       +-- Locked Objects(4.0)
|       +-- Lock Usage - Top 10 Sessions(4.0)
|       +-- Longest Transactions - Top 10 Sessions(4.0)
|       +-- Memory Usage - Top 10 Sessions(4.0)
|       +-- Physical I/O - Top 10 Sessions(4.0)
|       +-- System Overview(4.0)
|       +-- <Drilldown Only>
|           +-- Datafile I/O Activity Detail(4.0)
|           +-- Error Log
|           +-- Open Cursors(4.0)
|           +-- Session Detail(4.0)
|           +-- Session Statistics Detail(4.0)
|           +-- SQL Text(4.0)
|   +-- <Recent Past>
|       +-- Cache Usage
|       +-- Full Table Scans
|       +-- Redo Log Buffer Contention
```

1.8.2 Agent for Microsoft SQL Server

```
<SQL>
+-- <Monthly Trend>
|   +-- Cache Usage Trend(Multi-Agent)
|   +-- Network Activity Trend
|   +-- Server CPU Trend
|   +-- Server Space Trend(Multi-Agent)
+-- <Status Reporting>
|   +-- <Daily Trend>
|   |   +-- Cache Usage Trend(Multi-Agent)
|   |   +-- Network Activity Trend
|   |   +-- Server CPU Trend
|   |   +-- Server Space Trend(Multi-Agent)
|   +-- <Real-Time>
|   |   +-- Database Space Usage
|   |   +-- Server Configuration Status
|   |   +-- Server Space Usage
|   |   +-- System Overview
|   |   +-- <Drilldown Only>
|   |       +-- Database Space Usage Detail
+-- <Troubleshooting>
|   +-- <Real-Time>
|   |   +-- Blocked Sessions
|   |   +-- Blocking Locks
|   |   +-- CPU Usage - Top 10 Sessions
|   |   +-- Database Summary
|   |   +-- Errorlog Overview
|   |   +-- Lock Overview
|   |   +-- Lock Overview by Lock Type
|   |   +-- Lock Usage - Top 10 Sessions
|   |   +-- Log Space Usage - Top 10 Databases
|   |   +-- Memory Usage - Top 10 Sessions
|   |   +-- Physical I/O - Top 10 Sessions
|   |   +-- Sessions
|   |   +-- <Drilldown Only>
|   |       +-- Database Detail
|   |       +-- Errorlog Detail
|   |       +-- Lock Detail
|   |       +-- Session Detail
+-- <Recent Past>
|   +-- Cache Usage
|   +-- Log I/O Activity
|   +-- Network Activity
|   +-- Pending I/O
|   +-- Physical Write Activity
```

1.8.3 Agent for Microsoft Exchange Server

```
<MSExchange>
+-- <Monthly Trend>
|   +-- Mailbox Messages Trend
|   +-- Users Trend
+-- <Status Reporting>
|   +-- <Daily Trend>
|       +-- Database Cache Trend
|       +-- Epoxy Trend
|       +-- Information Store Trend
|       +-- Mailbox Messages Trend
|   +-- <Real-Time>
|       +-- Process Detail
+-- <Troubleshooting>
    +-- <Recent Past>
        +-- Mailbox Message Queue Trend
        +-- Database Log Trend
```

1.8.4 Agent for DB2

```
<DB2 Universal Database>
+-- <Monthly Trend>
|   +-- Bufferpool I/O Trend
|   +-- Cache Hit Rate Trend
+-- <Status Reporting>
|   +-- <Daily Trend>
|       +-- Bufferpool I/O Status
|       +-- Cache Hit Rate Status
+-- <Real-Time>
|   +-- Basic Information on Database
|   +-- Basic Information on Database Manager
|   +-- Bufferpool Stat on Database
|   +-- Sort Status on Database
+-- <Troubleshooting>
|   +-- <Real-Time>
|       +-- Cache on Database
|       +-- SQL Statement on Database
+-- <Recent Past>
|   +-- Cache Hit Rate
```

1.9 Agent for Oracle Reports

Table 1.29 lists the reports defined in the solution set in alphabetical order.

Table 1.29 Agent for Oracle Reports

Report Name	Displayed Information	Storage Location
Blocking Locks (4.0)	Session that includes a lock that places another session in wait status	Reports/Oracle/Troubleshooting/Real-Time/
Cache Usage	Buffer cache usage on a minute-by-minute basis over the past hour	Reports/Oracle/Troubleshooting/Recent Past/
Cache Usage Status (Multi-Agent)	Summary of the buffer cache usage for multiple agents on an hour-by-hour basis over the past 24 hours	Reports/Oracle/Status Reporting/Daily Trend/
Cache Usage Trend (Multi-Agent)	Summary of the buffer cache usage for multiple agents on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/
Database Activity Status (4.0)	Database activity status	Reports/Oracle/Status Reporting/Real-Time/
Database Activity Status Detail (4.0)	Details about database activity status	Reports/Oracle/Status Reporting/Real-Time/Drilldown Only/
Database Activity Status (Multi-Agent)	I/O statistical information on database instances for multiple agents on an hour-by-hour basis over the past 24 hours	Reports/Oracle/Status Reporting/Daily Trend/
Database Activity Trend (Multi-Agent)	Summary of I/O processing for multiple agents on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/
Database Space Overview (4.0)	Performance data and general database information on tablespaces and data files	Reports/Oracle/Status Reporting/Real-Time/
Database Space Summary (Multi-Agent)	Summary of space usage for multiple agents at the instance level on an hour-by-hour basis over the past 24 hours	Reports/Oracle/Status Reporting/Daily Trend/Advanced/
Database Space Trend (Multi-Agent)	Summary of space usage for instances in multiple agents on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/Advanced/

Report Name	Displayed Information	Storage Location
Datafile I/O Activity Detail (4.0)	Details about disk I/O operations on a data file	Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/
Datafile I/O Status Detail (Reads) (4.0)	Details about average number of disk read operations on any data file on an hour-by-hour basis over the past 24 hours	Reports/Oracle/Status Reporting/Daily Trend/Advanced/Drilldown Only/
Datafile I/O Status Detail (Writes) (4.0)	Details about average number of disk write operations on any data file on an hour-by-hour basis over the past 24 hours	Reports/Oracle/Status Reporting/Daily Trend/Advanced/Drilldown Only/
Datafile I/O Status Summary (4.0)	Number of disk I/O operations per data file on an hour-by-hour basis over the past 24 hours	Reports/Oracle/Status Reporting/Daily Trend/Advanced/
Datafile I/O Trend Detail (Reads) (4.0)	Details about disk read operations on any data file on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/Advanced/Drilldown Only/
Datafile I/O Trend Detail (Writes) (4.0)	Details about disk write operations on any data file on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/Advanced/Drilldown Only/
Datafile I/O Trend Summary (4.0)	Summary of disk I/O operations per data file on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/Advanced/
Disk Sorts - Top 10 Sessions (4.0)	Top 10 sessions in terms of the frequency of disk sort operations	Reports/Oracle/Troubleshooting/Real-Time/
Error Log	All entries that have been recorded in the error log since the agent started	Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/
Full Table Scans	Percentage of table lookups using no index on a minute-by-minute basis over the past hour	Reports/Oracle/Troubleshooting/Recent Past/
I/O Activity - Top 10 Datafiles (4.0)	Top 10 data files in terms of the number of disk I/O operations	Reports/Oracle/Troubleshooting/Real-Time/
Lock Usage - Top 10 Sessions (4.0)	Top 10 sessions in terms of the number of locks being held	Reports/Oracle/Troubleshooting/Real-Time/
Locked Objects (4.0)	Objects that are locked by transactions	Reports/Oracle/Troubleshooting/Real-Time/

Report Name	Displayed Information	Storage Location
Longest Transactions - Top 10 Sessions (4.0)	Top 10 sessions in terms of the length of a transaction that placed another session in wait status	Reports/Oracle/Troubleshooting/Real-Time/
Memory Usage - Top 10 Sessions (4.0)	Top 10 sessions in terms of memory usage	Reports/Oracle/Troubleshooting/Real-Time/
Open Cursors (4.0)	Cursor opened by a session	Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/
Physical I/O - Top 10 Sessions (4.0)	Top 10 sessions in terms of concentration of I/O operations	Reports/Oracle/Troubleshooting/Real-Time/
Redo Log Buffer Contention	Number of times a process waited for space in the REDO log buffer on a minute-by-minute basis over the past hour	Reports/Oracle/Troubleshooting/Recent Past/
Server Configuration Status (4.0)	Information on setup parameters	Reports/Oracle/Status Reporting/Real-Time/
Session Detail (4.0)	Detailed session information	Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/
Session Statistics Detail (4.0)	Statistical information about a session	Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/
SGA Status (5.0)	Status of each component in the SGA	Reports/Oracle/Status Reporting/Real-Time/
SGA Status Summary (5.0)	Summary of each component in the SGA on a day-by-day basis over the past month	Reports/Oracle/Monthly Trend/Advanced/
SQL Text (4.0)	Performance data in the SQL Text and Explain Plan fields	Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/
System Overview (4.0) (Real-Time Rpt on the Overall Status of Instance)	Main performance data indicating the overall status of an instance in real-time	Reports/Oracle/Status Reporting/Real-Time/
System Overview (4.0) (Real-Time Rpt on the General Status of Instance)	Performance data indicating the general status of an instance	Reports/Oracle/Troubleshooting/Real-Time/
Tablespace Status (4.0)	Status of all tablespaces in the database	Reports/Oracle/Status Reporting/Real-Time/
Tablespace Status Detail (4.0)	Details about a specified tablespace	Reports/Oracle/Status Reporting/Real-Time/Drilldown Only/

1.9.1 Blocking Locks(4.0)

Overview

The Blocking Locks(4.0) report displays real-time information about a session that includes a lock that places another session in wait status. If you cannot display this report, create Oracle's static dictionary view DBA_WAITERS. You can create DBA_WAITERS by executing the CATBLOCK.SQL script that is provided by Oracle.

Agent for Oracle does not display this report if the Oracle server does not have enough performance data to display the report.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Lock Waiters (PD_PDLW)

Table 1.30 Report Data for Blocking Locks (4.0)

Fields	
Field Name	Description
Holding Session	Session identifier that has the lock. To display the <code>Locked Objects (4.0)</code> report, choose this field.
Holding User	Name of the user that has the lock
Mode Held	Lock mode held during data collection
Mode Requested	Lock mode requested during data collection
Waiting Session	Session identifier waiting for lock release. To display the <code>Session Detail (4.0)</code> report, choose this field.
Waiting User	Name of the user waiting for the lock to be released
Drilldown Report (Report Level)	
Report Name	Description
<code>Longest Transactions - Top 10 Sessions (4.0)</code>	Displays the top 10 transactions in terms of the length of a transaction that places another session in wait status.
Drilldown Reports (Field Level)	
Report Name	Description
<code>Locked Objects (4.0)</code>	Displays the objects that are locked by the session. To display this report, choose the Holding Session field.
<code>Session Detail (4.0)</code>	Displays detailed information about the session. To display this report, choose the Waiting Session field.

1.9.2 Cache Usage

Overview

The Cache Usage report displays the usage of buffer cache on a minute-by-minute basis over the past hour.

Storage Location

Reports/Oracle/Troubleshooting/Recent Past/

Record

System Stat Summary Interval (PI)

Table 1.31 Report Data for Cache Usage

Fields	
Field Name	Description
Cache Hit %	Percentage indicating the ratio of logical read operations to physical read operations
Dict Cache Get Miss %	Percentage of data resulting in cache miss
Lib Cache Miss %	Ratio of the objects reloaded to the objects found in the library cache

1.9.3 Cache Usage Status (Multi-Agent)

Overview

The Cache Usage Status(Multi-Agent) report displays a summary of the buffer cache usage for multiple agents on an hour-by-hour basis over the past 24 hours.

Storage Location

Reports/Oracle/Status Reporting/Daily Trend/

Record

System Stat Summary Interval (PI)

Field

Name: Cache Hit %

Description: Percentage of logical read operations to physical read operations

1.9.4 Cache Usage Trend (Multi-Agent)

Overview

The Cache Usage Trend(Multi-Agent) report displays a summary of the buffer cache usage for multiple agents on a day-by-day basis over the past month.

Storage Location

Reports/Oracle/Monthly Trend/

Record

System Stat Summary Interval (PI)

Field

Name: Cache Hit %

Description: Percentage indicating the ratio of logical read operations to physical read operations

1.9.5 Database Activity Status (4.0)

Overview

The Database Activity Status(4.0) report displays real-time status information about database activity.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/

Record

Activity Summary (PD_PDAS)

Table 1.32 Report Data for Database Activity Status (4.0)

Fields	
Field Name	Description
DML Locks %	Percentage of DML locks to the <code>DML_LOCKS</code> parameter in the <code>init.ora</code> initialization parameter file
Open Cursors %	Percentage of open cursors to the <code>OPEN_CURSORS</code> parameter in the <code>init.ora</code> initialization parameter file
Processes %	Percentage of processes to the <code>PROCESSES</code> parameter in the <code>init.ora</code> initialization parameter file
Sessions %	Percentage of sessions to the <code>SESSIONS</code> parameter in the <code>init.ora</code> initialization parameter file
Transactions %	Percentage of transactions to the <code>TRANSACTIONS</code> parameter in the <code>init.ora</code> initialization parameter file
Drilldown Report (Report Level)	
Report Name	Description
Database Activity Status Detail (4.0)	Displays details about the database activity status.

1.9.6 Database Activity Status Detail (4.0)

Overview

The Database Activity Status Detail (4.0) report displays in real-time details about the database activity status. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/Drilldown Only/

Record

Activity Summary (PD_PDAS)

Table 1.33 Report Data for Database Activity Status Detail (4.0)

Fields	
Field Name	Description
Active Transactions	Number of active transactions in active sessions
DML Locks %	Percentage of DML locks to the DML_LOCKS parameter in the init.ora initialization parameter file
DML Locks Held	Number of current DML locks
Open Cursors	Number of current open cursors
Open Cursors %	Percentage of open cursors to the OPEN_CURSORS parameter in the init.ora initialization parameter file
Processes	Number of current Oracle processes
Processes %	Percentage of processes to the PROCESSES parameter in the init.ora initialization parameter file
Sessions	Number of current sessions
Sessions %	Percentage of sessions to the SESSIONS parameter in the init.ora initialization parameter file
Transactions %	Percentage of transactions to the TRANSACTIONS parameter in the init.ora initialization parameter file

1.9.7 Database Activity Status (Multi-Agent)

Overview

The Database Activity Status(Multi-Agent) report displays I/O statistical information on database instances for multiple agents on an hour-by-hour basis over the past 24 hours.

Storage Location

Reports/Oracle/Status Reporting/Daily Trend/

Record

System Stat Summary Interval (PI)

Field

Name: I/O Ops/sec

Description: Number of I/O operations per second

1.9.8 Database Activity Trend (Multi-Agent)

Overview

The Database Activity Trend(Multi-Agent) report displays a summary of I/O processing for multiple agents on a day-by-day basis over the past month.

Storage Location

Reports/Oracle/Monthly Trend/

Record

System Stat Summary Interval (PI)

Field

Name: I/O Ops/sec

Description: Number of I/O operations per second

1.9.9 Database Space Overview (4.0)

Overview

The Database Space Overview (4.0) report displays in real-time performance data and general database information on tablespaces and data files.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/

Record

Database (PD_PDDDB)

Table 1.34 Report Data for Database Space Overview (4.0)

Fields	
Field Name	Description
Datafiles	Number of data files used by tablespaces
DB Name	Database name
Extents	Number of extents
Free %	Percentage of available space
Free Extents	Number of available extents
Free Mbytes	Available space in megabytes
Rollback Segments	Number of rollback segments
Segments	Number of segments
Tablespaces	Number of tablespaces
Used Mbytes	Used space indicated in megabytes
Drilldown Report (Report Level)	
Report Name	Description
Tablespace Status (4.0)	Displays usage information on all tablespaces in the instance.

1.9.10 Database Space Summary (Multi-Agent)

Overview

The Database Space Summary(Multi-Agent) report displays a summary of space usage for multiple agents at the instance level on an hour-by-hour basis over the past 24 hours.

Storage Location

Reports/Oracle/Status Reporting/Daily Trend/Advanced/

Record

Database Interval (PI_PIDB)

Table 1.35 Report Data for Database Space Summary (Multi-Agent)

Fields	
Field Name	Description
Datafiles	Number of data files used by the tablespace
Free %	Percentage of available space
Free Extents	Number of available extents
Mbytes	Size of the tablespace in megabytes
Tablespaces	Number of tablespaces

1.9.11 Database Space Trend (Multi-Agent)

Overview

The Database Space Trend (Multi-Agent) report displays a summary of space usage for instances in multiple agents on a day-by-day basis over the past month.

Storage Location

Reports/Oracle/Monthly Trend/Advanced/

Record

Database Interval (PI_PIDB)

Table 1.36 Report Data for Database Space Trend (Multi-Agent)

Fields	
Field Name	Description
Datafiles	Number of data files used by the tablespace
Free %	Percentage of available space
Free Extents	Number of available extents
Mbytes	Size of the tablespace in megabytes
Tablespaces	Number of tablespaces

1.9.12 Datafile I/O Activity Detail (4.0)

Overview

The Datafile I/O Activity Detail (4.0) report displays in real-time the details about disk I/O operations on a data file. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/

Record

Data File (PD_PDDF)

Table 1.37 Report Data for Datafile I/O Activity Detail (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Blocks Read	Number of physical block read operations
Physical Blocks Written	Number of physical block write operations
Physical Reads	Number of physical read operations
Physical Writes	Number of physical write operations
Tablespace Name	Tablespace name

1.9.13 Datafile I/O Status Detail (Reads) (4.0)

Overview

The Datafile I/O Status Detail(Reads)(4.0) report displays details about average number of disk read operations on any data file on an hour-by-hour basis over the past 24 hours. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Status Reporting/Daily Trend/Advanced/Drilldown Only/

Record

Data File Interval (PI_PIDF)

Table 1.38 Report Data for Datafile I/O Status Detail(Reads)(4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Blocks Read	Number of physical block read operations
Physical Blocks Written	Number of physical block write operations
Physical Reads	Number of completed physical read operations
Physical Writes	Number of completed physical write operations
Tablespace Name	Tablespace name

1.9.14 Datafile I/O Status Detail (Writes) (4.0)

Overview

The Datafile I/O Status Detail(Writes)(4.0) report displays details about average number of disk write operations on any data file on an hour-by-hour basis over the past 24 hours. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Status Reporting/Daily Trend/Advanced/Drilldown Only/

Record

Data File Interval (PI_PIDF)

Table 1.39 Report Data for Datafile I/O Status Detail (Writes) (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Blocks Read	Number of physical block read operations
Physical Blocks Written	Number of physical block write operations
Physical Reads	Number of completed physical read operations
Physical Writes	Number of completed physical write operations
Tablespace Name	Tablespace name

1.9.15 Datafile I/O Status Summary (4.0)

Overview

The Datafile I/O Status Summary(4.0) report displays a summary of disk I/O operations per data file on an hour-by-hour basis over the past 24 hours.

Storage Location

Reports/Oracle/Status Reporting/Daily Trend/Advanced/

Record

Data File Interval (PI_PIDF)

Table 1.40 Report Data for Datafile I/O Status Summary (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Reads(Total)	Total number of physical read operations. Choose this field to display the Datafile I/O Status Detail (Reads) (4.0) report.
Physical Writes(Total)	Total number of physical write operations. Choose this field to display the Datafile I/O Status Detail (Writes) (4.0) report.
Drilldown Reports (Field Level)	
Report Name	Description
Datafile I/O Status Detail (Reads) (4.0)	Displays details about average disk read operations on any data file on an hour-by-hour basis over the past 24 hours. To display this report, choose the Physical Reads (shown as "Physical Reads (Total)") field.
Datafile I/O Status Detail (Writes) (4.0)	Displays details about average disk write operations on any data file on an hour-by-hour basis over the past 24 hours. To display this report, choose the Physical Writes (shown as "Physical Writes (Total)") field.

1.9.16 Datafile I/O Trend Detail (Reads) (4.0)

Overview

The Datafile I/O Trend Detail(Reads)(4.0) report displays details about disk read operations on any data file on a day-by-day basis over the past month. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Monthly Trend/Advanced/Drilldown Only/

Record

Data File Interval (PI_PIDF)

Table 1.41 Report Data for Datafile I/O Trend Detail (Reads) (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Blocks Read	Number of physical block read operations
Physical Blocks Written	Number of physical block write operations
Physical Reads	Number of completed physical read operations
Physical Writes	Number of completed physical write operations
Tablespace Name	Tablespace name

1.9.17 Datafile I/O Trend Detail (Writes) (4.0)

Overview

The Datafile I/O Trend Detail(Writes)(4.0) report displays details about disk write operations on any data file on a day-by-day basis over the past month. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Monthly Trend/Advanced/Drilldown Only/

Record

Data File Interval (PI_PIDF)

Table 1.42 Report Data for Datafile I/O Trend Detail (Writes) (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Blocks Read	Number of physical block read operations
Physical Blocks Written	Number of physical block write operations
Physical Reads	Number of completed physical read operations
Physical Writes	Number of completed physical write operations
Tablespace Name	Tablespace name

1.9.18 Datafile I/O Trend Summary (4.0)

Overview

The Datafile I/O Trend Summary(4.0) report displays a summary of disk I/O operations per data file on a day-by-day basis over the past month.

Storage Location

Reports/Oracle/Monthly Trend/Advanced/

Record

Data File Interval (PI_PIDF)

Table 1.43 Report Data for Datafile I/O Trend Summary (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Reads	Number of physical read operations that were completed during the interval. Choose this field to display the Datafile I/O Status Detail (Reads) (4.0) report.
Physical Writes	Number of physical write operations that were completed during the interval. Choose this field to display the Datafile I/O Status Detail (Writes) (4.0) report.
Drilldown Reports (Field Level)	
Report Name	Description
Datafile I/O Trend Detail (Reads) (4.0)	Displays details about disk read operations on any data file on a day-by-day basis over the past month. To display this report, choose the Physical Reads field.
Datafile I/O Trend Detail (Writes) (4.0)	Displays details about disk write operations on any data file on a day-by-day basis over the past month. To display this report, choose the Physical Writes field.

1.9.19 Disk Sorts - Top 10 Sessions (4.0)

Overview

The Disk Sorts - Top 10 Sessions(4.0) report displays in real-time the top 10 sessions in terms of the frequency of disk sort operations.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Session Statistics Summary (PD_PDS2)

Table 1.44 Report Data for Disk Sorts - Top 10 Sessions (4.0)

Fields	
Field Name	Description
SID	Session identifier
Sort Overflow %	Percentage of sort operations using temporary segments. To display the <i>Session Detail (4.0)</i> report, choose this field.
User	Oracle user name
Drilldown Report (Field Level)	
Report Name	Description
<i>Session Detail (4.0)</i>	Displays detailed information about a session. To display this report, choose the Sort Overflow % field.

1.9.20 Error Log

Overview

The Error Log report displays in real-time all entries that have been recorded in the error log since the agent started. This is a drilldown report.

Agent for Oracle does not display this report if the Oracle server does not have enough performance data to display the report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/

Record

Errorlog Detail (PD_PDEL)

Table 1.45 Report Data for Error Log

Fields	
Field Name	Description
Error #	Error number
Error File	File name resulting in the error
Error Time	Time the error occurred
Message	Error message

1.9.21 Full Table Scans

Overview

The Full Table Scans report displays the percentage of table lookups using no index on a minute-by-minute basis over the past hour.

Storage Location

Reports/Oracle/Troubleshooting/Recent Past/

Record

System Stat Summary Interval (PI)

Table 1.46 Report Data for Full Table Scans

Field	
Field Name	Description
Non-Index Lookups %	Percentage ratio of full table scans where no caching is performed
Drilldown Report (Field Level)	
Report Name	Description
Cache Usage	Displays the buffer cache usage. To display this report, choose the Non Index Lookups % field.

1.9.22 I/O Activity - Top 10 Datafiles (4.0)

Overview

The I/O Activity - Top 10 Datafiles(4.0) report displays in real-time the top 10 data files in terms of the number of disk I/O operations.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Data File (PD_PDDF)

Table 1.47 Report Data for I/O Activity - Top 10 Datafiles (4.0)

Fields	
Field Name	Description
File #	File number
File Name	File name
Physical Reads	Number of physical read operations. To display the Datafile I/O Activity Detail (4.0) report, choose this field.
Physical Writes	Number of physical write operations. To display the Datafile I/O Activity Detail (4.0) report, choose this field.
Drilldown Reports (Report Level)	
Report Name	Description
Datafile I/O Activity Detail (4.0)	Displays the details about I/O operations for all data files. To display this report, choose the Physical Read or Physical Writes field.
Physical I/O - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of the number of I/O operations.
Drilldown Report (Field Level)	
Report Name	Description
Datafile I/O Activity Detail (4.0)	Displays details about disk I/O operations for a specified data file. To display this report, choose the Physical Reads or Physical Writes field.

1.9.23 Lock Usage - Top 10 Sessions (4.0)

Overview

The Lock Usage - Top 10 Sessions (4.0) report displays in real-time the top 10 sessions in terms of the number of locks being held.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Session Detail (PD_PDS)

Table 1.48 Report Data for Lock Usage - Top 10 Sessions (4.0)

Fields	
Field Name	Description
Locks Held	Number of locks held during data collection. To display the <i>Session Detail (4.0)</i> report, choose this field.
SID	Session identifier
User	Oracle user name
Drilldown Report (Field Level)	
Report Name	Description
<i>Session Detail (4.0)</i>	Display detailed information about a session. To display this report, choose the Locks Held field.

1.9.24 Locked Objects (4.0)

Overview

The Locked Objects(4.0) report displays real-time information about the objects that are locked by transactions.

Agent for Oracle does not display this report if the Oracle server does not have enough performance data to display the report.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Transaction Lock (PD_PDTL)

Table 1.49 Report Data for Locked Objects (4.0)

Fields	
Field Name	Description
Locked Mode	Lock mode held. The valid values are as follows: 1 (null) 2 (row share) 3 (row exclusive) 4 (share) 5 (share row exclusive) 6 (exclusive)
Object Name	Object name
Object Type	Object type
Owner	Object owner
SID	Session identifier. To display the <i>Session Detail (4.0)</i> report, choose this field.
User	Oracle user name
Drilldown Report (Field Level)	
Report Name	Description
<i>Session Detail (4.0)</i>	Displays detailed information about a session. To display this report, choose the SID field.

1.9.25 Longest Transactions - Top 10 Sessions (4.0)

Overview

The Longest Transactions - Top 10 Sessions(4.0) report displays in real-time the top 10 transactions in terms of the length of a transaction that placed another session in wait status.

Agent for Oracle does not display this report if the Oracle server does not have enough performance data to display the report.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Transaction (PD_PDTR)

Table 1.50 Report Data for Longest Transactions - Top 10 Sessions (4.0)

Fields	
Field Name	Description
Cache Hit %	Percentage of logical I/O operations to physical I/O operations.
Locks	Number of locks being held by the transaction. To display the <code>Blocking Locks (4.0)</code> report, choose this field.
Logical I/O	Logical I/O operations
Physical I/O	Physical I/O operations
SID	Session identifier. To display the <code>Open Cursors (4.0)</code> report, choose this field.
Tran Secs	Number of seconds since the transaction started
User	Oracle user name
Drilldown Reports (Field Level)	
Report Name	Description
<code>Blocking Locks (4.0)</code>	Displays a sessions that includes a lock that places another session in wait status. To display this report, choose the Locks field.
<code>Open Cursors (4.0)</code>	Displays the cursors that are opened by a session. To display this report, choose the SID field.

1.9.26 Memory Usage - Top 10 Sessions (4.0)

Overview

The Memory Usage - Top 10 Sessions(4.0) report displays in real-time the top 10 sessions in terms of memory usage.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Session Statistics Summary (PD_PDS2)

Table 1.51 Report Data for Memory Usage - Top 10 Sessions (4.0)

Fields	
Field Name	Description
PGA Memory	Displays the PGA size for the sessions. To display a <i>Session Detail (4.0)</i> report, choose this field.
SID	Session identifier
UGA Memory	Displays the UGA size for the sessions. To display a <i>Session Detail (4.0)</i> report, choose this field.
User	Oracle user name
Drilldown Report (Field Level)	
Report Name	Description
<i>Session Detail (4.0)</i>	Displays detailed information about a session. To display this report, choose the PGA Memory or UGA Memory field.

1.9.27 Open Cursors (4.0)

Overview

The Open Cursors(4.0) report displays in real-time a cursor opened by a session. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/

Record

Open Cursor (PD_PDOC)

Table 1.52 Report Data for Open Cursors (4.0)

Fields	
Field Name	Description
Addrhash	Character string that identifies the SQL statement being executed
Program	Name of the program being executed
SID	Session identifier
SQL Text	First 60 characters of the SQL statement that was analyzed by the open cursor. To display the <code>SQL Text (4.0)</code> report, choose this field.
User	Oracle user name
Drilldown Report (Report Level)	
Report name	Description
SQL Text (4.0)	Displays the performance data in the SQL Text and Explain Plan fields. To display this field, choose the SQL Text field.

1.9.28 Physical I/O - Top 10 Sessions (4.0)

Overview

The Physical I/O - Top 10 Sessions(4.0) report displays in real-time the top 10 sessions in terms of concentration of I/O operations.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

Session I/O Interval (PI_PIIO)

Table 1.53 Report Data for Physical I/O - Top 10 Sessions (4.0)

Fields	
Field Name	Description
Physical Reads	Number of physical read operations. To display the <i>Session Detail (4.0)</i> report, choose this field.
SID	Session identifier
User	Oracle user name
Drilldown Report (Report Level)	
Report Name	Description
I/O Activity - Top 10 Datafiles (4.0)	Displays the top 10 data files in terms of the number of disk I/O operations.
Drilldown Report (Field Level)	
Report name	Description
Session Detail (4.0)	Displays detailed information about a session. To display this report, choose the Physical Reads field.

1.9.29 Redo Log Buffer Contention

Overview

The Redo Log Buffer Contention report displays the number of times a process waited for space in the REDO log buffer on a minute-by-minute basis over the past hour.

Storage Location

Reports/Oracle/Troubleshooting/Recent Past/

Record

System Stat Summary Interval (PI)

Field

Name: Redo Log Space Requests

Description: Number of times the LGWR process waited for space to exist in the REDO log buffer

1.9.30 Server Configuration Status (4.0)

Overview

The Server Configuration Status(4.0) report displays real-time information on setup parameters.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/

Record

Parameter Values (PD_PDP)

Table 1.54 Report Data for Server Configuration Status (4.0)

Fields	
Field Name	Description
Is Default	Default value. The valid values are TRUE and FALSE.
Parameter Name	Parameter name. There are two parameters: <ul style="list-style-type: none">Parameter with size restriction that has no effect on performanceParameter with no size restriction that has an effect on performance
Value	Parameter value

1.9.31 Session Detail (4.0)

Overview

The Session Detail(4.0) report displays in real-time detailed information about a session. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/

Record

Session Detail (PD_PDS)

Table 1.55 Report Data for Session Detail (4.0)

Fields	
Field Name	Description
Addrhash	Character string that identifies the SQL statement being executed
Blocking Locks	Number of locks that are blocking other locks
Command	Command being executed. To display the <code>SQL Text (4.0)</code> report, choose this field.
Locks Held	Number of locks held during data collection
Open Cursors	Number of open cursors. To display the <code>Open Cursors (4.0)</code> report, choose this field.
Program	Name of the program being executed
Session Events	Number of events the session is waiting for
Session Waits	Number of resources and events the session is waiting for
Sessions Blocked	Number of sessions that have been placed in wait status by this session
SID	Session identifier. To display the <code>Session Statistics Detail (4.0)</code> report, choose this field.
Table Accesses	Number of table accesses
Transactions	Number of active transactions
User	Oracle user name

Drilldown Reports (Field Level)	
Report Name	Description
Open Cursors (4.0)	Displays detailed information about the open cursors in the session. To display this report, choose the Open Cursors field.
Session Statistics Detail (4.0)	Displays detailed statistical information about a session. To display this report, choose the SID field.
SQL Text (4.0)	Displays the performance data in the SQL Text and Explain Plan fields. To display this report, choose the Command field.

1.9.32 Session Statistics Detail (4.0)

Overview

The Session Statistics Detail(4.0) report displays in real-time statistical information about a session. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/

Record

Session Statistics Summary (PD_PDS2)

Table 1.56 Report Data for Session Statistics Detail (4.0)

Fields	
Field Name	Description
Blocking Locks	Number of locks in a session that are blocking other locks
Cache Hit %	Percentage of logical read operations to physical read operations
Disk Sorts	Number of disk sort operations
Lock Requests	Number of lock requests
Lock Waits	Number of times lock request was placed in wait status
Memory Sorts	Number of sort operations in memory
PGA Memory	Session's PGA size
Physical Reads	Number of real read operations on a database block from disk
Program	Program name
SID	Session identifier
Sort Overflow %	Percentage of sort operations using temporary segments
UGA Memory	Session's UGA size
User	Oracle user name

1.9.33 SGA Status(5.0)

Overview

The SGA Status (5.0) report displays in real-time the status of a component in the SGA.

Note: This report is valid only when the Oracle database being monitored is Oracle9i® or later.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/

Record

SGA Components (PD_PDSEG)

Table 1.57 SGA Status(5.0)

Fields	
Field Name	Description
Bytes	Memory size (units: bytes)
Component Name	SGA component name

1.9.34 SGA Status Summary(5.0)

Overview

The SGA Status Summary (5.0) report displays a summary of a component in the SGA on a day-by-day basis over the past month.

Note: This report is valid only when the Oracle database being monitored is Oracle9i or later.

Storage Location

Reports/Oracle/Monthly Trend/Advanced/

Record

SGA Components (PD_PD_SG)

Table 1.58 SGA Status Summary(5.0)

Fields	
Field Name	Description
Bytes	Memory size (units: bytes)
Component Name	SGA component name
Total Bytes	Total size of memory used by the SGA components (units: bytes)

1.9.35 SQL Text (4.0)

Overview

The SQL Text(4.0) report displays in real-time the performance data in the SQL Text and Explain Plan fields. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/Drilldown Only/

Record

SQL Text (PD_PDSQ)

Table 1.59 Report Data for SQL Text (4.0)

Fields	
Field Name	Description
Explain Plan	Execution plan on the <code>SELECT</code> , <code>UPDATE</code> , <code>INSERT</code> , and <code>DELETE</code> statements selected by the Oracle optimizer.
SQL Text	Part of the SQL text

1.9.36 System Overview (4.0) (Real-Time Rpt on the Overall Status of Instance)

Overview

The System Overview(4.0) report displays in real-time the main performance data indicating the overall status of an instance.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/

Record

System Stat Summary (PD)

Table 1.60 Report Data for System Overview (4.0) (Real-Time Rpt on the Overall Status of Instance)

Fields	
Field Name	Description
Cache Hit %	Percentage of logical read operations to physical read operations. To display the Physical I/O - Top 10 Sessions(4.0) report, choose this field.
Continued Row %	Percentage of the rows that are longer than one block or moved (continued rows or moved rows)
Current Logons	Number of logons to the Oracle database during data collection
Deadlocks	Number of process deadlocks caused by enqueue (lock) resulting from manipulation of data definition language (DDL)
Disk Sorts	Number of disk sort operations. To display the Disk Sorts - Top 10 Sessions (4.0) report, choose this field.
Lock Requests	Number of lock requests. To display the Lock Usage - Top 10 Sessions (4.0) report, choose this field.
Memory Sorts	Number of memory sort operations. To display the Disk Sorts - Top 10 Sessions (4.0) report, choose this field.
Session CPU Usage	CPU time used in 1/100 seconds
Session PGA Memory	PGA size used by active sessions during data collection. To display the Memory Usage - Top 10 Sessions (4.0) report, choose this field.
Session UGA Memory	UGA size used by active sessions. To display the Memory Usage - Top 10 Sessions (4.0) report, choose this field.
Sort Overflow %	Percentage of sort operations using temporary segments. To display the Disk Sorts - Top 10 Sessions (4.0) report, choose this field.
Total SQL Executions	Number of SQL statement executions
User Calls	Number of requests from application to database that have been processed

Fields	
Field Name	Description
User Commits	Number of transactions. To display the Longest Transaction - Top 10 Sessions (4.0) report, choose this field.
User Rollbacks	Number of rollbacks
Drilldown Reports (Report Level)	
Report Name	Description
Database Activity Status (4.0)	Displays instance activity status.
Database Space Overview (4.0)	Displays usage information about tablespaces and data files for the instance.
Error Log	Displays the error messages that have been issued since the agent started.
Server Configuration Status (4.0)	Displays all setup parameter information for the server.
Tablespace Status (4.0)	Displays all tablespace information.
Drilldown Reports (Field Level)	
Report Name	Description
Disk Sorts - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of the frequency of disk sort operations. To display this report, choose the following fields: <ul style="list-style-type: none"> ▪ Disk Sorts ▪ Memory Sorts ▪ Sort Overflow %
Lock Usage - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of the number of locks held. To display this report, choose the Lock Requests field.
Longest Transaction - Top 10 Sessions (4.0)	Displays the top 10 transactions in terms of the length of a transaction that placed another session in wait status. To display this report, choose the User Commits field.
Memory Usage - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of memory usage. To display this report, choose the Session PGA Memory or Session UGA Memory field.
Physical I/O - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of concentration of I/O operations. To display this report, choose the Cache Hit % field.

1.9.37 System Overview (4.0) (Real-Time Rpt on the General Status of Instance)

Overview

The System Overview(4.0) report displays in real-time the main performance data indicating the general status of an instance.

Storage Location

Reports/Oracle/Troubleshooting/Real-Time/

Record

System Stat Summary (PD)

Table 1.61 Report Data for System Overview (4.0) (Real-Time Rpt on the General Status of Instance)

Fields	
Field Name	Description
Cache Hit %	Percentage of logical read operations to physical read operations. To display the Physical I/O - Top 10 Sessions(4.0) report, choose this field.
Continued Row %	Percentage of the rows that are longer than one block or moved (continued rows or moved rows)
Current Logons	Number of logons to the Oracle database during data collection
Deadlocks	Number of process deadlocks caused by enqueue (lock) resulting from manipulation of data definition language (DDL)
Disk Sorts	Number of disk sort operations. To display the Disk Sorts - Top 10 Sessions (4.0) report, choose this field.
Lock Requests	Number of lock requests. To display the Lock Usage - Top 10 Sessions (4.0) report, choose this field.
Memory Sorts	Number of memory sort operations. To display the Disk Sorts - Top 10 Sessions (4.0) report, choose this field.
Session CPU Usage	CPU time used in 1/100 seconds
Session PGA Memory	PGA size used by active sessions during data collection. To display the Memory Usage - Top 10 Sessions (4.0) report, choose this field.
Session UGA Memory	UGA size used by active sessions. To display the Memory Usage - Top 10 Sessions (4.0) report, choose this field.
Sort Overflow %	Percentage of sort operations using temporary segments. To display the Disk Sorts - Top 10 Sessions (4.0) report, choose this field.
Total SQL Executions	Total number of SQL statement executions
User Calls	Number of requests from application to database that have been processed

Fields	
Field Name	Description
User Commits	Number of transactions. To display the Longest Transaction - Top 10 Sessions (4.0) report, choose this field.
User Rollbacks	Number of rollbacks
Drilldown Reports (Report Level)	
Report Name	Description
Database Activity Status (4.0)	Displays the instance activity status.
Database Space Overview (4.0)	Displays usage information about tablespaces and data files for the instance.
Error Log	Displays the error messages that have been issued since the agent started.
Server Configuration Status (4.0)	Displays all setup parameter information for the server.
Tablespace Status (4.0)	Displays all tablespace information.
Drilldown Reports (Field Level)	
Report Name	Description
Disk Sorts - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of the frequency of disk sort operations. To display this report, choose the following fields: <ul style="list-style-type: none"> ▪ Disk Sorts ▪ Memory Sorts ▪ Sort Overflow %
Lock Usage - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of the number of locks held. To display this report, choose the Lock Requests field.
Longest Transaction - Top 10 Sessions (4.0)	Displays the top 10 transactions in terms of the length of a transaction that placed another session in wait status. To display this report, choose the User Commits field.
Memory Usage - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of memory usage. To display this report, choose the Session PGA Memory or Session UGA Memory field.
Physical I/O - Top 10 Sessions (4.0)	Displays the top 10 sessions in terms of concentration of I/O operations. To display this report, choose the Cache Hit % field.

1.9.38 Tablespace Status (4.0)

Overview

The Tablespace Status(4.0) report displays in real-time the status of all tablespaces in the database.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/

Record

Tablespace (PD_PDTS)

Table 1.62 Report Data for Tablespace Status (4.0)

Fields	
Field Name	Description
Free %	Percentage of available space
Free Mbytes	Available space in megabytes. To display the Tablespace Status Detail (4.0) report, choose this field.
Tablespace Name	Name of tablespace associated with the instance
Used Mbytes	Used space indicated in megabytes. To display the Tablespace Status Detail (4.0) report, choose this field.
Drilldown Report (Field Level)	
Report Name	Description
Tablespace Status Detail (4.0)	Displays detailed information about a specified tablespace. To display this report, choose the Free Mbytes or Used Mbytes field.

1.9.39 Tablespace Status Detail (4.0)

Overview

The Tablespace Status Detail(4.0) report displays in real-time details about a specified tablespace. This is a drilldown report.

Note: Make sure that you display a drilldown report from the Report window for a related report. Do not display a drilldown report from the Main window or the Report Tree Selection window.

Storage Location

Reports/Oracle/Status Reporting/Real-Time/Drilldown Only/

Record

Tablespace (PD_PDTS)

Table 1.63 Report Data for Tablespace Status Detail (4.0)

Fields	
Field Name	Description
Data Files	Number of data files used by the tablespace
Extents	Number of extents
Free %	Percentage of available bytes
Free Extents	Number of available extents
Free Mbytes	Available space in megabytes
Mbytes	Size of the tablespace in megabytes
Segments	Number of segments
Tablespace Name	Tablespace name

1.10 Microsoft SQL Server Reports

Table 1.64 lists the reports defined in the solution set in alphabetical order.

Table 1.64 Agent for Microsoft SQL Server Reports

Report Name	Displayed Information	Storage Location
Blocked Sessions	Information related to sessions that are waiting for lock release by other sessions	Reports/SQL/Troubleshooting/Real-Time/
Blocking Locks	Information related to sessions that have locks that are blocking other sessions	Reports/SQL/Troubleshooting/Real-Time/
Cache Usage	Cache statistics information for I/O buffers on a minute-by-minute basis over the past hour	Reports/SQL/Troubleshooting/Recent Past/
Cache Usage Trend (Multi-Agent)	Cache statistics information for I/O buffers on an hour-by-hour basis over the past 24 hours	Reports/SQL/Status Reporting/Daily Trend/
Cache Usage Trend (Multi-Agent)	Cache statistics information for I/O buffers on a day-by-day basis over the past month	Reports/SQL/Monthly Trend/
CPU Usage - Top 10 Sessions	Information related to the top 10 sessions that are currently using the largest numbers of CPU cycles	Reports/SQL/Troubleshooting/Real-Time/
Database Detail	Detailed information related to a particular database in Microsoft SQL Server	Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/
Database Space Usage	Information related to space usage in each database in Microsoft SQL Server	Reports/SQL/Status Reporting/Real-Time/
Database Space Usage Detail	Detailed information related to space usage in each database in Microsoft SQL Server	Reports/SQL/Status Reporting/Real-Time/Drilldown Only/
Database Summary	Detailed information related to the statuses of all databases in Microsoft SQL Server	Reports/SQL/Troubleshooting/Real-Time/
Errorlog Detail	Actual error messages recorded in the Microsoft SQL Server error log file	Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/
Errorlog Overview	Overview of all errors that occurred in Microsoft SQL Server in the last interval	Reports/SQL/Troubleshooting/Real-Time/
Lock Detail	Detailed information related to each lock	Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/
Lock Overview	Overview of locks in the entire instance (total number of database locks being maintained)	Reports/SQL/Troubleshooting/Real-Time/
Lock Overview by Lock Type	Overview of locks in the entire instance (total numbers of database locks being maintained by lock type)	Reports/SQL/Troubleshooting/Real-Time/

Report Name	Displayed Information	Storage Location
Lock Usage - Top 10 Sessions	Information related to the top 10 sessions that currently have the largest numbers of locks on database objects	Reports/SQL/Troubleshooting/Real-Time/
Log I/O Activity	Statistics information related to log entries by server on a minute-by-minute basis over the past hour	Reports/SQL/Troubleshooting/Recent Past/
Log Space Usage - Top 10 Databases	Information related to the top 10 databases that are currently consuming the largest amounts of log space	Reports/SQL/Troubleshooting/Real-Time/
Memory Usage - Top 10 Sessions	Information related to the top 10 sessions that are currently using the largest amounts of memory	Reports/SQL/Troubleshooting/Real-Time/
Network Activity	Statistics information related to network activities on a minute-by-minute basis over the past hour	Reports/SQL/Troubleshooting/Recent Past/
Network Activity Trend	Statistics information related to network activities on an hour-by-hour basis over the past 24 hours	Reports/SQL/Status Reporting/Daily Trend/
Network Activity Trend	Statistics information related to network activities on a day-by-day basis over the past month	Reports/SQL/Monthly Trend/
Pending I/O	This report is reserved and cannot be used.	Reports/SQL/Troubleshooting/Recent Past/
Physical I/O - Top 10 Sessions	Information related to the top 10 sessions that are currently executing the largest number of disk read/write operations	Reports/SQL/Troubleshooting/Real-Time/
Physical Write Activity	Statistics information related to write activities on a minute-by-minute basis over the past hour	Reports/SQL/Troubleshooting/Recent Past/
Server Configuration Status	Information related to environment setting parameter values for Microsoft SQL Server	Reports/SQL/Status Reporting/Real-Time/
Server CPU Trend	Statistics information on CPU usage on an hour-by-hour basis over the past 24 hours	Reports/SQL/Status Reporting/Daily Trend/
Server CPU Trend	Statistics information on CPU usage on a day-by-day basis over the past month	Reports/SQL/Monthly Trend/
Server Space Trend (Multi-Agent)	Statistical information on available space on an hour-by-hour basis over the past 24 hours	Reports/SQL/Status Reporting/Daily Trend/
Server Space Trend (Multi-Agent)	Statistical information on available space on a day-by-day basis over the past month	Reports/SQL/Monthly Trend/
Server Space Usage	Statistics information related to the overall space usage in Microsoft SQL Server	Reports/SQL/Status Reporting/Real-Time/
Session Detail	Detailed information related to resource usage in each session	Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/

Report Name	Displayed Information	Storage Location
Sessions	Information related to the statuses of all processes connected to Microsoft SQL Server	Reports/SQL/Troubleshooting/Real-Time/
System Overview	Detailed information related to Microsoft SQL Server	Reports/SQL/Status Reporting/Real-Time/

1.10.1 Blocked Sessions

Overview

The Blocked Sessions report displays the information related to sessions that are waiting for lock release by other sessions. This report is displayed as a table. From the displayed report, you can display more detailed drilldown reports.

Note: Performance is degraded for sessions that must repeatedly wait for a lock release to be performed.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Lock Detail (PD_LD)

Table 1.65 Report Data for Blocked Sessions

Fields	
Field Name	Description
Blocking Flag	This flag indicates whether or not the lock is a blocking lock. The following values are valid: 1 Blocking lock 0 Not a blocking lock
DB Name	Database name related to lock resource
Demand Flag	This flag indicates whether or not the lock is a request lock. The following values are valid: 1 Request lock 0 Not a request lock
Lock Type	Lock type (lock request mode and lock resource type)
Orphan Flag	This flag indicates whether or not the lock is an isolated lock. The following values are valid: 1 Isolated lock 0 Not an isolated lock
Program	Name of the application program that is requesting the lock

Fields	
Field Name	Description
SPID	Process ID that is requesting the lock
Table	Table name if the lock resource is a table or row
User	Logon name of the user who issued the command
Drilldown Reports (Field Level)	
Report Name	Description
Lock Detail	Displays detailed information related to each lock. To display this report, click the Lock Type field.
Session Detail	Displays detailed information related to resource usage status in each session. To display this report, click the SPID field.

1.10.2 Blocking Locks

Overview

The Blocking Locks report displays information related to sessions that have locks that are blocking other sessions. The report is displayed as a table. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Lock Detail (PD_LD)

Table 1.66 Report Data for Blocking Locks

Fields	
Field Name	Description
Blocking Flag	This flag indicates whether or not the lock is a blocking lock. The following values are valid: 1 Blocking lock 0 Not a blocking lock
DB Name	Database name related to lock resource
Demand Flag	This flag indicates whether or not the lock is a request lock. The following values are valid: 1 Request lock 0 Not a request lock
Lock Type	Lock type (lock request mode and lock resource type)
Orphan Flag	This flag indicates whether or not the lock is an isolated lock. The following values are valid: 1 Isolated lock 0 Not an isolated lock
Program	Name of the application program that is requesting the lock
SPID	Process ID that is requesting the lock
Table	Table name if the lock resource is a table or row

Fields	
Field Name	Description
User	Logon name of the user who issued the command
Drilldown Reports (Field Level)	
Report Name	Description
Lock Detail	Displays detailed information related to each lock. To display this report, click the Lock Type field.
Session Detail	Displays detailed information related to resource usage status in each session. To display this report, click the SPID field.

1.10.3 Cache Usage

Overview

The Cache Usage report displays cache statistics information for I/O buffers on a minute-by-minute basis over the past hour. The display format is a line graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Recent Past/

Record

Server Overview (PI_SERV)

Table 1.67 Report Data for Cache Usage

Field	
Field Name	Description
Cache Hit %	Rate at which data pages were found inside the data cache
Drilldown Report (Report Level)	
Report Name	Description
Physical I/O - Top 10 Sessions	Displays information related to the top 10 sessions that are currently executing the largest number of disk read/write operations.

1.10.4 Cache Usage Trend (Multi-Agent)

Overview

The Cache Usage Trend(Multi-Agent) report displays cache statistics information for I/O buffers on an hour-by-hour basis over the past 24 hours. The display format is a line graph. You can display this report for multiple instances of Microsoft SQL Server.

Storage Location

Reports/SQL/Status Reporting/Daily Trend/

Record

Server Overview (PI_SERV)

Field

Name: Cache Hit %

Description: Rate at which data pages were found inside the data cache

1.10.5 Cache Usage Trend (Multi-Agent)

Overview

The Cache Usage Trend(Multi-Agent) report displays cache statistics information for I/O buffers on a day-by-day basis over the past month. The display format is a line graph. You can display this report for multiple instances of Microsoft SQL Server.

Storage Location

Reports/SQL/Monthly Trend/

Record

Server Overview (PI_SERV)

Field

Name: Cache Hit %

Description: Rate at which data pages were found inside the data cache

1.10.6 CPU Usage - Top 10 Sessions

Overview

The CPU Usage - Top 10 Sessions report displays information related to the top 10 sessions that are currently using the largest numbers of CPU cycles. This report is displayed as a bar graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Process Detail (PD_PDET)

Table 1.68 Report Data for CPU Usage - Top 10 Sessions

Fields	
Field Name	Description
Command	Name of the command being executed
CPU %	CPU time being used by the process as a percentage of the CPU time being used by all database processes
Physical I/O	Cumulative number of times the process executed read/write operations to disks
Program	Application program name
SPID	Process ID
User	Logon name of the user who issued the command
Drilldown Report (Field Level)	
Report Name	Description
Session Detail	Displays detailed information related to resource usage by each session. To display this report, click the CPU % field.

1.10.7 Database Detail

Overview

The Database Detail report displays detailed information related to a particular database on Microsoft SQL Server. This report is displayed as a list. This is a drilldown report.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/

Record

Database Detail (PD_DD)

Table 1.69 Report Data for Database Detail

Fields	
Field Name	Description
Availability	Database status. The following values are valid: Active Enabled. Process is running. Available Enabled. No process is running. NOT Available A crash or problem may have occurred during loading, and as a result the database cannot be opened or used in its current state. Restricted The database can be used only by its owner or a single user.
Blocked Processes	Number of blocked processes
Blocking Locks	Number of blocking locks
Create Date	Database creation date
DB Name	Database name
DB Owner	Database owner
DBID	Database ID
Demand Locks	Number of request locks
Exclusive Intent Locks	Number of exclusive intent locks
Exclusive Page Locks	Number of exclusive page locks
Exclusive Table Locks	Number of exclusive table locks
Last Dump Date	Last dump date for the transaction log

Fields	
Field Name	Description
Locks	Total number of locks
Options	Database option
Other Processes	Number of other types of processes
Process Count	Total number of processes
Runnable Processes	Number of executable processes
Running Processes	Number of processes being executed
Shared Intent Locks	Number of shared intent locks
Shared Page Locks	Number of shared page locks
Shared Table Locks	Number of shared table locks
Sleeping Processes	Number of sleeping processes
Update Page Locks	Number of update page locks
Version	Microsoft SQL Server version used for database creation

1.10.8 Database Space Usage

Overview

The Database Space Usage report displays information related to space usage in each database in Microsoft SQL Server. This report is displayed as a pie graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Status Reporting/Real-Time/

Record

Database Space Detail (PD_DS)

Table 1.70 Report Data for Database Space Usage

Fields	
Field Name	Description
Data Mbytes	Size of database being used (megabytes)
DBID	Database ID
Free Mbytes	Size of free space (megabytes)
Index Mbytes	Size of index space being used (megabytes)
Unused Mbytes	Size of allocated but unused space (megabytes)
Drilldown Report (Report Level)	
Report Name	Description
Database Space Usage Detail	Displays detailed information related to space usage in each database.
Drilldown Report (Field Level)	
Report Name	Description
Database Space Usage Detail	Displays detailed information related to space usage in each database. To display this report, click the following fields: <ul style="list-style-type: none">Data MbytesFree MbytesIndex MbytesUnused Mbytes

1.10.9 Database Space Usage Detail

Overview

The Database Space Usage Detail report displays detailed information related to space usage in each database on Microsoft SQL Server. This report is displayed as a list. This is a drilldown report.

Storage Location

Reports/SQL/Status Reporting/Real-Time/Drilldown Only/

Record

Database Space Detail (PD_DS)

Table 1.71 Report Data for Database Space Usage Detail

Fields	
Field Name	Description
Data Mbytes	Size of database being used (megabytes)
DB Name	Database name
DB Size	Database size (megabytes)
DBID	Database ID
Free Mbytes	Size of free space (megabytes)
Index Mbytes	Size of index space being used (megabytes)
Log Mbytes	Size of log space being used (megabytes)
Rsvd Mbytes	Size of allocated space (megabytes)
Unused Mbytes	Size of allocated but unused space (megabytes)

1.10.10 Database Summary

Overview

The Database Summary report displays detailed information related to the statuses of all databases in Microsoft SQL Server. This report is displayed as a table. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Database Detail (PD_DD)

Table 1.72 Report Data for Database Summary

Fields	
Field Name	Description
Availability	Database status. The following values are valid: Active Enabled. Process is running. Available Enabled. No process is running. NOT Available A crash or problem may have occurred during loading, and as a result the database cannot be opened or used in its current state. Restricted Database can be used only by its owner or a single user.
Blocked Processes	Number of blocked processes
Blocking Locks	Number of blocking locks
Create Date	Database creation date
DB Name	Database name
DB Owner	Database owner
DBID	Database ID
Last Dump Date	Last dump date for the transaction log
Locks	Total number of locks
Process Count	Total number of processes
Version	Microsoft SQL Server version used for database creation

Drilldown Reports (Field Level)	
Report Name	Description
Blocked Sessions	Displays the information related to sessions that are waiting for lock release by other sessions. To display this report, click the Blocked Processes field.
Blocking Locks	Displays information related to sessions that have locks that are blocking other sessions. To display this report, click the Blocking Locks field.
Database Detail	Displays detailed information related to a particular database on Microsoft SQL Server. To display this report, click the DB Name field.
Sessions	Displays information related to the statuses of all processes connected to Microsoft SQL Server. To display this report, click the Process Count field.

1.10.11 Errorlog Detail

Overview

The Errorlog Detail report displays the actual error messages recorded in the Microsoft SQL Server error log file. This report is displayed as a table. It is a drilldown report.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/

Record

Errorlog Error Detail (PD_EE)

Table 1.73 Report Data for Errorlog Detail

Fields	
Field Name	Description
Error #	Error number
Error Time	Error date
Message	Error message character string
Severity	Error message severity level
State	Error message status code

1.10.12 Errorlog Overview

Overview

The Errorlog Overview report displays the overview of all errors that occurred in Microsoft SQL Server in the last interval. This report is displayed as a list. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Errorlog Summary Detail (PD_ES)

Table 1.74 Report Data for Errorlog Overview

Fields	
Field Name	Description
Errorlog Errors	Total number of errors recorded in the error log during the interval
Fatal Errors	Total number of fatal errors that occurred during the interval
Internal Errors	Total number of internal errors that occurred during the interval
Last Error Time	Last error date
Resource Errors	Total number of resource errors that occurred during the interval
Drilldown Report (Report Level)	
Report Name	Description
Errorlog Detail	Displays the actual error messages recorded in the Microsoft SQL Server error log file.

1.10.13 Lock Detail

Overview

The Lock Detail report displays detailed information related to each lock. This report is displayed as a list. It is a drilldown report. From the displayed drilldown report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/

Record

Lock Detail (PD_LD)

Table 1.75 Report Data for Lock Detail

Fields	
Field Name	Description
Blocking Flag	This flag indicates whether or not the lock is a blocking lock. The following values are valid: 1 Blocking lock 0 Not a blocking lock
DB Name	Database name related to lock resource
DBID	Database ID related to lock resource
Demand Flag	This flag indicates whether or not the lock is a request lock. The following values are valid: 1 Request lock 0 Not a request lock
Lock Type	Lock type (lock request mode and lock resource type)
Orphan Flag	This flag indicates whether or not the lock is an isolated lock. The following values are valid: 1 Isolated lock 0 Not an isolated lock
Page #	Number of pages allocated to lock resource

Fields	
Field Name	Description
Program	Name of the application program that is requesting the lock
SPID	Process ID that is requesting the lock
Table	Table name if the lock resource is a table or row
User	Logon name of the user who issued the command
Drilldown Report (Field Level)	
Report Name	Description
Session Detail	Displays detailed information related to resource usage in each session. To display this report, click the SPID field.

1.10.14 Lock Overview

Overview

The Lock Overview report displays the overview of locks in the entire instance as the total number of database locks being maintained. This report is displayed as a list. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Server Locks Detail (PD_LOCK)

Table 1.76 Report Data for Lock Overview

Fields	
Field Name	Description
Total Blocking Locks	Number of locks that are blocking other processes
Total Exclusive Locks	Total number of exclusive locks
Total Extent Locks	Total number of extent locks
Total Intent Locks	Total number of intent locks
Total Locks	Total number of locks being used by Microsoft SQL Server
Total Page Locks	Total number of page locks
Total Shared Locks	Total number of shared locks
Total Table Locks	Total number of table locks
Users Blocked	Number of users who are blocked by other users
Drilldown Report (Report Level)	
Report Name	Description
Lock Overview by Lock Type	Displays the overview of locks in the entire instance as the total numbers of database locks being maintained by lock type.
Drilldown Reports (Field Level)	
Report Name	Description
Blocked Sessions	Displays the information related to sessions that are waiting for lock release by other sessions. To display this report, click the Users Blocked field.
Blocking Locks	Displays information related to sessions that have locks that are blocking other sessions. To display this report, click the Total Blocking Locks field.

1.10.15 Lock Overview by Lock Type

Overview

The Lock Overview by Lock Type report displays the overview of locks in the entire instance as the total number of database locks being maintained by lock type. This report is displayed as a list.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Server Locks Detail (PD_LOCK)

Table 1.77 Report Data for Lock Overview by Lock Type

Fields	
Field Name	Description
Exclusive Extent Locks	Number of exclusive extent locks
Exclusive Intent Locks	Number of exclusive intent locks
Exclusive Page Locks	Number of exclusive page locks
Exclusive Table Locks	Number of exclusive table locks
Shared Intent Locks	Number of shared intent locks
Shared Page Locks	Number of shared page locks
Shared Table Locks	Number of shared table locks
Update Extent Locks	Number of update extent locks
Update Page Locks	Number of update page locks

1.10.16 Lock Usage - Top 10 Sessions

Overview

The Lock Usage - Top 10 Sessions report displays information related to the top 10 sessions that currently have the largest numbers of locks on database objects. This report is displayed as a bar graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Process Detail (PD_PDET)

Table 1.78 Report Data for Lock Usage - Top 10 Sessions

Fields	
Field Name	Description
Blocked Processes	Number of processes blocked by the process
DB Name	Name of the database being used by the process at the time of record acquisition
Locks	Number of locks being requested by the process at the time of record acquisition
Program	Application program name
SPID	Process ID
User	Logon name of the user who issued the command
Drilldown Report (Field Level)	
Report Name	Description
Session Detail	Displays detailed information related to resource usage in each session. To display this report, click the Locks field.

1.10.17 Log I/O Activity

Overview

The Log I/O Activity report displays statistics information related to log entries by server on a minute-by-minute basis over the past hour. The display format is a line graph.

Storage Location

Reports/SQL/Troubleshooting/Recent Past/

Record

Server Overview (PI_SERV)

Field

Name: Log Writes/sec

Description: Number of log pages per second physically written onto a disk during an interval

1.10.18 Log Space Usage - Top 10 Databases

Overview

The Log Space Usage - Top 10 Databases report displays information related to the top 10 databases that are currently consuming the largest amounts of log space. This report is displayed as a bar graph.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Transaction Log Overview (PI_TLOG)

Table 1.79 Report Data for Log Space Usage - Top 10 Databases

Fields	
Field Name	Description
DB Name	Database name
Log Size Mbytes	Size of space allocated to transaction log (megabytes)

1.10.19 Memory Usage - Top 10 Sessions

Overview

The Memory Usage - Top 10 Sessions report displays information related to the top 10 sessions that are currently using the largest amounts of memory. This report is displayed as a bar graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Process Detail (PD_PDET)

Table 1.80 Report Data for Memory Usage - Top 10 Sessions

Fields	
Field Name	Description
Mem Usage	Number of procedure cache pages allocated to the process (1 page equals 8 kilobytes)
Program	Application program name
Drilldown Report (Field Level)	
Report Name	Description
Session Detail	Displays detailed information related to resource usage in each session. To display this report, click the Mem Usage field.

1.10.20 Network Activity

Overview

The Network Activity report displays statistics information related to network activities on a minute-by-minute basis over the past hour. The display format is a line graph.

Storage Location

Reports/SQL/Troubleshooting/Recent Past/

Record

Global Server Summary (PI)

Table 1.81 Report Data for Network Activity

Fields	
Field Name	Description
Pkt Errors	Number of packet errors
Pkts Rcvd	Number of packets received
Pkts Sent	Number of packets sent

1.10.21 Network Activity Trend

Overview

The Network Activity Trend report displays statistics information related to network activities on an hour-by hour basis over the past 24 hours. The display format is a line graph.

Storage Location

Reports/SQL/Status Reporting/Daily Trend/

Record

Global Server Summary (PI)

Table 1.82 Report Data for Network Activity Trend

Fields	
Field Name	Description
Pkt Errors	Number of packet errors
Pkts Rcvd	Number of packets received
Pkts Sent	Number of packets sent

1.10.22 Network Activity Trend

Overview

The Network Activity Trend report displays statistics information related to network activities on a day-by-day basis over the past month. The display format is a line graph.

Storage Location

Reports/SQL/Monthly Trend/

Record

Global Server Summary (PI)

Table 1.83 Report Data for Network Activity Trend

Fields	
Field Name	Description
Pkt Errors	Number of packet errors
Pkts Rcvd	Number of packets received
Pkts Sent	Number of packets sent

1.10.23 Pending I/O

Overview

The Pending I/O report is reserved and cannot be used.

Storage Location

Reports/SQL/Troubleshooting/Recent Past/

1.10.24 Physical I/O - Top 10 Sessions

Overview

The Physical I/O - Top 10 Sessions report displays information related to the top 10 sessions that are currently executing the largest number of disk read/write operations. This report is displayed as a bar graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Process Detail (PD_PDET)

Table 1.84 Report Data for Physical I/O - Top 10 Sessions

Fields	
Field Name	Description
Physical I/O	Cumulative number of times the process executed read/write operations to disks
Program	Application program name
Drilldown Report (Field Level)	
Report Name	Description
Session Detail	Displays detailed information related to resource usage by each session. To display this report, click the Physical I/O field.

1.10.25 Physical Write Activity

Overview

The Physical Write Activity report displays statistics information related to write activities on a minute-by-minute basis over the past hour. The display format is a line graph.

You can use this report to check the statistics on physical writing and delay writing operations.

Storage Location

Reports/SQL/Troubleshooting/Recent Past/

Record

Server Overview (PI_SERV)

Table 1.85 Report Data for Physical Write Activity

Fields	
Field Name	Description
Lazy Writes/sec	Number of pagers per second flushed by Lazy Writer to a disk during an interval (1 page equals 8 kilobytes)
Page Writes/sec	Number of physical pages per second written during an interval

1.10.26 Server Configuration Status

Overview

The Server Configuration Status report displays information related to environment setting parameter values for Microsoft SQL Server. This report is displayed as a table.

Storage Location

Reports/SQL/Status Reporting/Real-Time/

Record

Config Detail (PD_CD)

Table 1.86 Report Data for Server Configuration Status

Fields	
Field Name	Description
Config Value	Environment setting option value
Current Run Value	Environment setting option value (execution value during data collection)
Max Value	Maximum value of environment setting option
Min Value	Minimum value of environment setting option
Name	Name of environment setting option

1.10.27 Server CPU Trend

Overview

The Server CPU Trend report displays statistics information on CPU usage on an hour-by-hour basis over the past 24 hours. The display format is a line graph.

Storage Location

Reports/SQL/Status Reporting/Daily Trend/

Record

Global Server Summary (PI)

Table 1.87 Report Data for Server CPU Trend

Fields	
Field Name	Description
CPU %	Percentage of time CPU is busy
I/O %	Percentage of CPU time spent for I/O
Idle %	Percentage of time CPU is idle

1.10.28 Server CPU Trend

Overview

The Server CPU Trend report displays statistics information on CPU usage on a day-by-day basis over the past month. The display format is a line graph.

Storage Location

Reports/SQL/Monthly Trend/

Record

Global Server Summary (PI)

Table 1.88 Report Data for Server CPU Trend

Fields	
Field Name	Description
CPU %	Percentage of time CPU is busy
I/O %	Percentage of CPU time spent for I/O
Idle %	Percentage of time CPU is idle

1.10.29 Server Space Trend (Multi-Agent)

Overview

The Server Space Trend(Multi-Agent) report displays statistical information on available space, on an hour-by-hour basis over the past 24 hours. The display format is a line graph. You can display this report for multiple instances of Microsoft SQL Server.

Storage Location

Reports/SQL/Status Reporting/Daily Trend/

Record

Server Space Interval (PI_SI)

Field

Name: Free %

Description: Percentage of free space to the size of the entire database

1.10.30 Server Space Trend (Multi-Agent)

Overview

The Server Space Trend(Multi-Agent) report displays statistical information on available space, on a day-by-day basis over the past month. The display format is a line graph. You can display this report for multiple instances of Microsoft SQL Server.

Storage Location

Reports/SQL/Monthly Trend/

Record

Server Space Interval (PI_SI)

Field

Name: Free %

Description: Percentage of free space to the size of the entire database

1.10.31 Server Space Usage

Overview

The Server Space Usage report displays statistics information related to the overall space usage in Microsoft SQL Server. This report is displayed as a pie graph and a list. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Status Reporting/Real-Time/

Record

Server Space Detail (PD_SS)

Table 1.89 Report Data for Server Space Usage

Fields	
Field Name	Description
Data Mbytes	Size of data space being used (megabytes)
DB Size	Size of the entire database (megabytes)
Free Mbytes	Size of free space (megabytes)
Index Mbytes	Size of index space being used (megabytes)
Log Mbytes	Size of log space being used (megabytes)
Rsvd Mbytes	Size of allocated space (megabytes)
Unused Mbytes	Size of allocated but unused space (megabytes)
Drilldown Report (Report Level)	
Report Name	Description
Database Space Usage	Displays information related to space usage in each database in Microsoft SQL Server.

1.10.32 Session Detail

Overview

The Session Detail report displays detailed information related to resource usage in each session. This report is displayed as a list. It is a drilldown report. From the displayed drilldown report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/Drilldown Only/

Record

Process Detail (PD_PDET)

Table 1.90 Report Data for Session Detail

Fields	
Field Name	Description
Blocked Processes	Number of processes blocked by the process
Blocking Process	Process ID of a blocking process, if any
Command	Name of the command executed
CPU %	CPU time being used by the process, as a percentage of the CPU time being used by all database processes
DB Name	Name of the database being used by the process at the time of record acquisition
DBID	Database ID being used by the process at the time of record acquisition
GID	This field is reserved and cannot be used.
Host	Host computer name
Host PID	Host process ID
Locks	Number of locks being requested by the process at the time of record acquisition
Mem Usage	Number of procedure cache pages allocated to the process (1 page equals 8 kilobytes)
Physical I/O	Cumulative number of times the process executed read/write operations to disks
Program	Application program name
SPID	Process ID
Status	Process status

Fields	
Field Name	Description
UID	User ID of the user who executed the command
User	Logon name of the user who issued the command
Drilldown Reports (Field Level)	
Report Name	Description
Blocked Sessions	Displays the information related to sessions that are waiting for lock release by other sessions. To display this report, click the Blocked Processes field.
Database Detail	Displays detailed information related to a particular database on Microsoft SQL Server. To display this report, click the DB Name field.
Lock Detail	Displays detailed information related to each lock. To display this report, click the Blocking Process field.

1.10.33 Sessions

Overview

The Sessions report displays information related to the statuses of all processes connected to Microsoft SQL Server. This report is displayed as a table. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Troubleshooting/Real-Time/

Record

Process Detail (PD_PDET)

Table 1.91 Report Data for Sessions

Fields	
Field Name	Description
Blocked Processes	Number of processes blocked by the process
Blocking Process	Process ID of a blocking process, if any
DB Name	Name of the database being used by the process at the time of record acquisition
DBID	Database ID being used by the process at the time of record acquisition
Mem Usage	Number of procedure cache pages allocated to the process (1 page equals 8 kilobytes)
Program	Application program name
SPID	Process ID
User	Logon name of the user who issued the command
Drilldown Reports (Field Level)	
Report Name	Description
Database Detail	Displays detailed information related to a particular database on Microsoft SQL Server. To display this report, click the DB Name field.
Session Detail	Displays detailed information related to resource usage by each session. To display this report, click one of the following fields: <ul style="list-style-type: none">Blocking ProcessSPID

1.10.34 System Overview

Overview

The System Overview report displays detailed information related to Microsoft SQL Server. This report is displayed as a list and a line graph. From the displayed report, you can display more detailed drilldown reports.

Storage Location

Reports/SQL/Status Reporting/Real-Time/

Record

Server Detail (PD)

Table 1.92 Report Data for System Overview

Fields	
Field Name	Description
Blocked Processes	Number of blocked processes
Blocking Locks	Number of blocking locks
Boot Time	Server boot date
Cache Hit %	Rate at which data pages were found inside the data cache during an interval
Conns	Number of client connections
CPU %	Percentage of time CPU is busy
Database Count	Number of databases
Host OS	OS that is running Microsoft SQL Server
Host Type	Type of machine on which Microsoft SQL Server is running
I/O %	Percentage of CPU time spent for I/O
Idle %	Percentage of time CPU is idle
Locks	Total number of locks
Pkt Errors	Number of packet errors
Pkts Rcvd	Number of packets received
Pkts Sent	Number of packets sent
Server Name	Name of the machine on which Microsoft SQL Server is running
Total Errors	Number of disk errors
Total Reads	Number of disk read operations

Fields	
Field Name	Description
Total Writes	Number of disk write operations
Version	Microsoft SQL Server version
Drilldown Reports (Report Level)	
Report Name	Description
Database Space Usage	Displays information related to space usage in each database in Microsoft SQL Server.
Lock Overview	Displays the overview of locks in the entire instance as a total number of database locks being maintained.
Log Space Usage - Top 10 Databases	Displays information related to the top 10 databases that are currently consuming the largest amounts of log space.
Server Configuration Status	Displays information related to environment setting parameter values for Microsoft SQL Server.
Server Space Usage	Displays statistics information related to the overall space usage in Microsoft SQL Server.
Drilldown Reports (Field Level)	
Report Name	Description
Blocked Sessions	Displays the information related to sessions that are waiting for lock release by other sessions. To display this report, click the Blocked Processes field.
Blocking Locks	Displays information related to sessions that have locks that are blocking other sessions. To display this report, click the Blocking Locks field.
CPU Usage - Top 10 Sessions	Displays information related to the top 10 sessions that are currently using the largest numbers of CPU cycles. To display this report, click the CPU % field.
Database Summary	Displays detailed information related to the statuses of all databases in Microsoft SQL Server. To display this report, click the Database Count field.
Errorlog Overview	Displays the overview of all errors that occurred in Microsoft SQL Server in the last interval. To display this report, click the Total Errors field.
Lock Usage - Top 10 Sessions	Displays information related to the top 10 sessions that currently have the largest numbers of locks on database objects. To display this report, click the Locks field.
Memory Usage - Top 10 Sessions	Displays information related to the top 10 sessions that are currently using the largest amounts of memory. To display this report, click the Cache Hit % field.
Network Activity	Displays statistics information related to network activities on a minute-by-minute basis over the past hour. To display this report, click one of the following fields: <ul style="list-style-type: none"> ▪ Pkt Errors ▪ Pkts Rcvd ▪ Pkts Sent

Drilldown Report (Field Level)	
Report Name	Description
Physical I/O - Top 10 Sessions	Displays information related to the top 10 sessions that are currently executing the largest number of disk read/write operations. To display this report, click the I/O % field.

1.11 Agent for Microsoft Exchange Server Reports

Table 1.93 lists the reports defined in the solution set in alphabetical order.

Table 1.93 Agent for Microsoft Exchange Server Reports

Report Name	Displayed Information	Storage Location
Database Cache Trend	Information about the database cache per hour over the past 24 hours	Reports/MSEExchange/Status Reporting/Daily Trend/
Database Log Trend	Information about the database log per minute over the past hour	Reports/MSEExchange/Troubleshooting/Recent Past/
Epoxy Trend	Information about the shared memory queue system (Epoxy) per hour over the past 24 hours	Reports/MSEExchange/Status Reporting/Daily Trend/
Information Store Trend	Information about the information store per hour over the past 24 hours	Reports/MSEExchange/Status Reporting/Daily Trend/
Mailbox Messages Trend (hourly historical report)	Information about the messages in the mailbox store per hour over the past 24 hours	Reports/MSEExchange/Status Reporting/Daily Trend/
Mailbox Messages Trend (daily historical report)	Information about the messages in the mailbox store per day over the past month	Reports/MSEExchange/Monthly Trend/
Mailbox Message Queue Trend	Information about the message queue in the mailbox store per minute over the past hour	Reports/MSEExchange/Troubleshooting/Recent Past/
Process Detail	Information about process status	Reports/MSEExchange/Status Reporting/Real-Time/
Users Trend	Status of user connections per day over the past month	Reports/MSEExchange/Monthly Trend/

1.11.1 Database Cache Trend

Overview

The Database Cache Trend report displays information about the cache in the database per hour over the past 24 hours. The information is displayed as a line graph.

Storage Location

Reports/MSExchange/Status Reporting/Daily Trend/

Record

Database (PI_DB)

Table 1.94 Report Data for Database Cache Trend

Fields	
Field Name	Description
Database Cache % Hit	Database Cache % Hit is the percentage of database file page requests that were fulfilled by the database cache without causing a file operation. If this percentage is too low, the database cache size may be too small.
Database Cache Size	Database Cache Size is the amount of system memory used by the database cache manager to hold commonly used information from the database file(s) to prevent file operations. If the database cache size seems to be too small for optimal performance and there is very little available memory on the system (see Memory/Available Bytes), adding more memory to the system may increase performance. If there is a lot of available memory on the system and the database cache size is not growing beyond a certain point, the database cache size may be capped at an artificially low limit. Increasing this limit may increase performance.
Database Page Fault Stalls/sec	Database Page Fault Stalls/sec is the rate of page faults that cannot be serviced because there are no pages available for allocation from the database cache. If this counter is non-zero most of the time, the clean threshold may be too low.
Table Open Cache % Hit	Table Open Cache % Hit is the percentage of database tables opened using cached schema information. If this percentage is too low, the table cache size may be too small.

1.11.2 Database Log Trend

Overview

The Database Log Trend report displays information about the database log per minute over the past hour. The information is displayed as a list.

Storage Location

Reports/MSExchange/Troubleshooting/Recent Past/

Record

Database (PI_DB)

Table 1.95 Report Data for Database Log Trend

Fields	
Field Name	Description
Log Record Stalls/sec	Log Record Stalls/sec is the number of log records that cannot be added to the log buffers per second because they are full. If this counter is non-zero most of the time, the log buffer size may be a bottleneck.
Log Threads Waiting	Log Threads Waiting is the number of threads waiting for their data to be written to the log in order to complete an update of the database. If this number is too high, the log may be a bottleneck.

1.11.3 Epoxy Trend

Overview

The Epoxy Trend report displays information about the shared memory queue system (Epoxy) per hour over the past 24 hours. The information is displayed as a table.

Storage Location

Reports/MSExchange/Status Reporting/Daily Trend/

Record

Epoxy (PI_EPOX)

Table 1.96 Report Data for Epoxy Trend

Fields	
Field Name	Description
Client Out Queue Length	Number of requests waiting to be processed by the Exchange store
Protocol Name	Protocol name
Store Out Queue Length	Number of requests waiting to be picked up by the Internet Information Services protocol handlers

1.11.4 Information Store Trend

Overview

The Information Store Trend report displays information about the information store per hour over the past 24 hours. The information is displayed as a line graph.

Storage Location

Reports/MSExchange/Status Reporting/Daily Trend/

Record

MSExchangeIS (PI)

Table 1.97 Report Data for Information Store Trend

Fields	
Field Name	Description
Connection Count	Connection Count is the number of client processes connected to the information store.
RPC Averaged Latency	RPC latency in milliseconds averaged for the past 1024 packets.
RPC Operations/sec	RPC Operations/sec is the rate that RPC operations occur.
RPC Requests	RPC Requests is the number of client requests that are currently being processed by the information store.

1.11.5 Mailbox Messages Trend (Hourly Historical Report)

Overview

The Mailbox Messages Trend report displays information about the messages in the mailbox store per hour over the past 24 hours. The information is displayed as a table.

Storage Location

Reports/MSEExchange/Status Reporting/Daily Trend/

Record

MSEExchangeIS Mailbox (PI_ISM)

Table 1.98 Report Data for Mailbox Messages Trend (Hourly Historical Report)

Fields	
Field Name	Description
Message Recipients Delivered/min	Message Recipients Delivered/min is the rate that recipients receive messages.
Messages Submitted/min	Messages Submitted/min is the rate that messages are submitted by clients.

1.11.6 Mailbox Messages Trend (Daily Historical Report)

Overview

The Mailbox Messages Trend report displays information about the messages in the mailbox store per day over the past month. The information is displayed as a table.

Storage Location

Reports/MSExchange/Monthly Trend/

Record

MSExchangeIS Mailbox (PI_ISM)

Table 1.99 Report Data for Mailbox Messages Trend (Daily Historical Report)

Fields	
Field Name	Description
Message Recipients Delivered/min	Message Recipients Delivered/min is the rate that recipients receive messages.
Messages Submitted/min	Messages Submitted/min is the rate that messages are submitted by clients.

1.11.7 Mailbox Message Queue Trend

Overview

The Mailbox Message Queue Trend report displays information about the message queue in the mailbox store per minute over the past hour. The information is displayed as a table.

Storage Location

Reports/MSExchange/Troubleshooting/Recent Past/

Record

MSExchangeIS Mailbox (PI_ISM)

Table 1.100 Report Data for Mailbox Message Queue Trend

Fields	
Field Name	Description
Average Delivery Time	Average Delivery Time is the average time in milliseconds between the submission of a message to the mailbox store and the delivery to all local recipients (recipients on the same server) for the last 10 messages.
Send Queue Size	Send Queue Size is the number of messages in the mailbox store's send queue.

1.11.8 Process Detail

Overview

The Process Detail report displays real-time information about the Microsoft Exchange Server processes (`store.exe`, `emsmta.exe`, `mad.exe`, and `exmgmt.exe`). The information is displayed as a table.

Storage Location

Reports/MSEExchange/Status Reporting/Real-Time/

Record

Process (PD)

Table 1.101 Report Data for Process Detail

Fields	
Field Name	Description
% Processor Time	% Processor Time is the percentage of elapsed time that all of process threads used the processor to execution instructions. An instruction is the basic unit of execution in a computer, a thread is the object that executes instructions, and a process is the object created when a program is run. Code executed to handle some hardware interrupts and trap conditions are included in this count.
Elapsed Time	The total elapsed time, in seconds, that this process has been running.
Page Faults/sec	Page Faults/sec is the rate at which page faults by the threads executing in this process are occurring. A page fault occurs when a thread refers to a virtual memory page that is not in its working set in main memory. This may not cause the page to be fetched from disk if it is on the standby list and hence already in main memory, or if it is in use by another process with whom the page is shared.
Page File Bytes	Page File Bytes is the current amount of virtual memory, in Kbytes, that this process has reserved for use in the paging file(s). Paging files are used to store pages of memory used by the process that are not contained in other files. Paging files are shared by all processes, and the lack of space in paging files can prevent other processes from allocating memory. If there is no paging file, this counter reflects the current amount of virtual memory that the process has reserved for use in physical memory.
Process Name	Process Name of Microsoft Exchange Server.
Virtual Bytes	Virtual Bytes is the current size, in Kbytes, of the virtual address space the process is using. Use of virtual address space does not necessarily imply corresponding use of either disk or main memory pages. Virtual space is finite, and the process can limit its ability to load libraries.
Working Set	Working Set is the current size, in Kbytes, of the Working Set of this process. The Working Set is the set of memory pages touched recently by the threads in the process. If free memory in the computer is above a threshold, pages are left in the Working Set of a process even if they are not in use. When free memory falls below a threshold, pages are trimmed from Working Sets. If they are needed they will then be soft-faulted back into the Working Set before leaving main memory.

1.11.9 Users Trend

Overview

The Users Trend report displays the status of user connections to the information store per day over the past month. The information is displayed as a line graph.

Storage Location

Reports/MSExchange/Monthly Trend/

Record

MSExchangeIS (PI)

Table 1.102 Report Data for Users Trend

Field	
Field Name	Description
User Count	User Count is the number of users connected to the information store.

1.12 Agent for DB2 Reports

Table 1.103 lists the reports that are defined in the solution set in alphabetical order:

Table 1.103 Agent for DB2 Reports

Report Name	Displayed Information	Storage Location
Basic Information on Database	Basic information on the database	Reports/DB2 Universal Database/Status Reporting/Real Time/Basic Information on Database
Basic Information on Database Manager	Basic information on the database at the database manager level	Reports/DB2 Universal Database/Status Reporting/Real Time/Basic Information on Database Manager
Bufferpool I/O Status	Buffer pool I/O status on an hourly basis over the last 24 hours	Reports/DB2 Universal Database/Status Reporting/Daily Trend/Bufferpool I/O Status
Bufferpool I/O Trend	Buffer pool I/O status on a daily basis over the last month	Reports/DB2 Universal Database/Monthly Trend/Bufferpool I/O Trend
Bufferpool Stat on Database	Buffer pool information at the database level	Reports/DB2 Universal Database/Status Reporting/Real Time/Bufferpool Stat on Database
Cache Hit Rate	Cache hit rate on a per-minute basis over the last hour	Reports/DB2 Universal Database/Troubleshooting/Recent Past/Cache Hit Rate
Cache Hit Rate Status	Cache hit rate on an hourly basis over the last 24 hours	Reports/DB2 Universal Database/Status Reporting/Daily Trend/Cache Hit Rate Status
Cache Hit Rate Trend	Cache hit rate on a daily basis over the last month	Reports/DB2 Universal Database/Monthly Trend/Cache Hit Rate Trend
Cache on Database	Cache information at the database level	Reports/DB2 Universal Database/Troubleshooting/Real Time/Cache on Database
Sort Status on Database	Sort information at the database level	Reports/DB2 Universal Database/Status Reporting/Real Time/Sort Status on Database
SQL Statement on Database	SQL Statement information at the database level	Reports/DB2 Universal Database/Troubleshooting/Real Time/SQL Statement on Database

1.12.1 Basic Information on Database

Overview

The Basic Information on Database report displays basic information on the database in real time.

Storage Location

Reports/DB2 Universal Database/Status Reporting/Real Time/Basic Information on Database

Record

Basic Information on Database (PD_DBID)

Table 1.104 Report Data for Basic Information on Database

Fields	
Field Name	Description
Agents Top	The maximum number of agents for applications at the database level.
Appl Section Inserts	The number of SQL sections inserted by an application from its SQL work area.
Appl Section Lookups	The number of SQL sections referenced by an application from its SQL work area.
Appls Cur Cons	The number of applications that are currently connected to the database.
Appls In DB2	The number of applications that are currently connected to the database, and for which the database manager is currently processing requests.
Coord Agents Top	The maximum number of coordinator agents that can run concurrently.
DB Heap Top	Memory usage
DB Name	The real name of the database for which information is collected or to which the application is connected.
DB Status	The current status of the database. The valid values are: <ul style="list-style-type: none">▪ 0 (SQLM_DB_ACTIVE: The database is active.)▪ 1 (SQLM_DB_QUIESCE_PEND: The database is in the quiescent pending state.)▪ 2 (SQLM_DB_QUIESCED: The database is in the quiescent state.)▪ 3 (SQLM_DB_ROLLFWD: A roll forward is in progress on the database.)
Hash Join Overflows	The number of times that hash join data exceeded the available sort heap space.
Hash Join Overflows Rate	Ratio of hash_join_overflows and hash_join_small_overflows.
Hash Join Small Overflows	The number of times that hash join data exceeded the available sort heap space by less than 10%.
Num Assoc Agents	At the database level, the number of subagents for all applications.
Total Hash Joins	The total number of hash joins executed.
Total Hash Loops	The total number of times that a single partition of a hash join was larger than the available sort heap space.

1.12.2 Basic Information on Database Manager

Overview

The Basic Information on Database Manager report displays basic information on the database at the database manager level, in real time.

Storage Location

Reports/DB2 Universal Database/Status Reporting/Real Time/Basic Information on Database Manager

Record

Basic Information on Database Manager (PD_PD)

Table 1.105 Report Data for Basic Information on Database Manager

Fields	
Field Name	Description
Agents Created Empty Pool	The number of agents created because the agent pool was empty.
Agents Created Pool Rate	The frequency of agents created because the agent pool was empty.
Agents From Pool	The number of agents assigned from the agent pool.
Agents Registered	The number of agents (coordinator agents and subagents) registered in the database manager instance that is being monitored.
Agents Registered Top	The maximum number of agents (coordinator agents and subagents) that the database manager has ever registered, at the same time, since it was started.
Agents Waiting On Token	The number of agents waiting for a token so that they can execute a transaction in the database manager.
Agents Waiting Top	The maximum number of agents that have ever been simultaneously waiting for a token since the database manager was started.
Comm Private Mem	The amount of private memory that the database manager instance has currently committed at the time of the snapshot.
Cons In Exec Total	The total number of applications that are currently connected to a database within the database manager instance being monitored and are currently processing a unit of work.
ConsTotal	The total number of applications that are currently connected to the database manager instance or the database being monitored.
DB2 Status	The current status of the database manager instance.
Local Cons	The number of local applications that are currently connected to a database within the database manager instance being monitored.
Local Cons In Exec	The number of local applications that are currently connected to a database within the database manager instance being monitored and are currently processing a unit of work.
Post Threshold Hash Joins	The total number of times that a hash join heap request was limited due to concurrent use of shared or private sort heap space.

Rem Cons In	The number of current connections initiated from remote clients to the database manager instance that is being monitored.
Rem Cons In Exec	The number of local applications that are currently connected to a database within the database manager instance being monitored and are currently processing a unit of work.
Sort Heap Allocated	The total number of allocated pages of sort heap space allocated for all sorts at the level chosen, at the time the snapshot was taken.

1.12.3 Bufferpool I/O Status

Overview

The Bufferpool I/O Status report displays a summary of the buffer pool I/O status on an hourly basis over the last 24 hours.

Storage Location

Reports/DB2 Universal Database/Status Reporting/Daily
Trend/Bufferpool I/O Status

Record

Bufferpool Stat on Database Interval (PI_DBPI)

Table 1.106 Report Data for Bufferpool I/O Status

Fields	
Field Name	Description
Pool Async Data Reads Rate	The ratio of the number of data pages read asynchronously into the buffer pool by a prefetcher to the number of read requests that required I/O to get data pages into the buffer pool.
Pool Async Data Writes Rate	The ratio of the number of times that a buffer pool data page was physically written to a disk by either an asynchronous page cleaner or a prefetcher to the number of times a buffer pool data page was physically written to the disk.
Pool Async Index Reads Rate	The ratio of the number of index pages read asynchronously into the buffer pool by a prefetcher to the number of physical read requests to get index pages into the buffer pool.
Pool Async Index Writes Rate	The ratio of the number of times a buffer pool index page was physically written to a disk by either an asynchronous page cleaner or a prefetcher to the number of times a buffer pool index page was physically written to a disk.
Pool Data L Reads	The number of logical read requests for data pages that have gone through the buffer pool.
Pool Data P Reads	The number of read requests that required I/O to get data pages into the buffer pool.
Pool Data Writes	The number of times a buffer pool data page was physically written to a disk.
Pool Index L Reads	The number of logical read requests for index pages that have gone through the buffer pool.
Pool Index P Reads	The number of physical read requests to get index pages into the buffer pool.
Pool Index Writes	The number of times a buffer pool index page was physically written to a disk.

1.12.4 Bufferpool I/O Trend

Overview

The Bufferpool I/O Trend report displays a summary of the buffer pool I/O status on a daily basis over the last month.

Storage Location

Reports/DB2 Universal Database/Monthly Trend/Bufferpool I/O Trend

Record

Bufferpool Stat on Database Interval (PI_DBPI)

Table 1.107 Report Data for Bufferpool I/O Trend

Fields	
Field Name	Description
Pool Async Data Reads Rate	The ratio of the number of data pages read asynchronously into the buffer pool by a prefetcher to the number of read requests that required I/O to get data pages into the buffer pool.
Pool Async Data Writes Rate	The ratio of the number of times that a buffer pool data page was physically written to a disk by either an asynchronous page cleaner or a prefetcher to the number of times a buffer pool data page was physically written to the disk.
Pool Async Index Reads Rate	The ratio of the number of index pages read asynchronously into the buffer pool by a prefetcher to the number of physical read requests to get index pages into the buffer pool.
Pool Async Index Writes Rate	The ratio of the number of times a buffer pool index page was physically written to a disk by either an asynchronous page cleaner or a prefetcher to the number of times a buffer pool index page was physically written to a disk.
Pool Data L Reads	The number of logical read requests for data pages that have gone through the buffer pool.
Pool Data P Reads	The number of read requests that required I/O to get data pages into the buffer pool.
Pool Data Writes	The number of times a buffer pool data page was physically written to a disk.
Pool Index L Reads	The number of logical read requests for index pages that have gone through the buffer pool.
Pool Index P Reads	The number of physical read requests to get index pages into the buffer pool.
Pool Index Writes	The number of times a buffer pool index page was physically written to a disk.

1.12.5 Bufferpool Stat on Database

Overview

The Bufferpool Stat on Database report displays information on the buffer pool at the database level, in real time.

Storage Location

Reports/DB2 Universal Database/Status Reporting/Real Time/Bufferpool Stat on Database

Record

Bufferpool Stat on Database (PD_DBPD)

Table 1.108 Report Data for Bufferpool Stat on Database

Fields	
Field Name	Description
Pool Async Data Reads	The number of pages read asynchronously into the buffer pool.
Pool Async Data Reads Rate	The ratio of the number of data pages read asynchronously into the buffer pool by a prefetcher to the number of read requests that required I/O to get data pages into the buffer pool.
Pool Async Data Writes	The number of times a buffer pool data page was physically written to a disk by either an asynchronous page cleaner or a prefetcher.
Pool Async Data Writes Rate	The ratio of the number of times that a buffer pool data page was physically written to a disk by either an asynchronous page cleaner or a prefetcher to the number of times a buffer pool data page was physically written to the disk.
Pool Async Index Reads	The number of index pages asynchronously read into the buffer pool by a prefetcher.
Pool Async Index Reads Rate	The ratio of the number of index pages read asynchronously into the buffer pool by a prefetcher to the number of physical read requests to get index pages into the buffer pool.
Pool Async Index Writes	The number of times a buffer pool index page was written to a disk by either an asynchronous page cleaner or a prefetcher.
Pool Async Index Writes Rate	The ratio of the number of times a buffer pool index page was physically written to a disk by either an asynchronous page cleaner or a prefetcher to the number of times a buffer pool index page was physically written to a disk.
Pool Async Read Time	The total elapsed time spent reading by database manager prefetchers.
Pool Async Read Time Avg	The average of the total elapsed time spent reading by database manager prefetchers.
Pool Async Total Reads	The total number of data and index pages read asynchronously into the buffer pool by prefetchers.
Pool Async Total Writes	The number of times a buffer pool data page or index page was physically written to a disk by an asynchronous page cleaner or a prefetcher.
Pool Async Write Time	The total elapsed time spent by database manager page cleaners writing data or

	index pages from the buffer pool to a disk.
Pool Async Write Time Avg	The average of the total elapsed time spent by database manager page cleaners writing data or index pages from the buffer pool to a disk.
Pool Data Hit Rate	Rate of data page hits.
Pool Data L Reads	The number of logical read requests for data pages that have gone through the buffer pool.
Pool Data P Reads	The number of read requests that required I/O to get data pages into the buffer pool.
Pool Data Writes	The number of times a buffer pool data page was physically written to a disk.
Pool Drty PG Steal Clns	The number of times a page cleaner was invoked because a synchronous write was needed during the victim buffer replacement for the database.
Pool Drty PG Steal Clns Rate	The ratio of the number of times a page cleaner was invoked because a synchronous write was needed during the victim buffer replacement for the database to the total number of page cleaner invocations.
Pool Drty PG Thrsh Clns	The number of times a page cleaner was invoked because a buffer pool had reached the dirty page threshold criterion for the database.
Pool Index Hit Rate	Rate of index page hits.
Pool Index L Reads	The number of logical read requests for index pages that have gone through the buffer pool.
Pool Index P Reads	The number of physical read requests to get index pages into the buffer pool.
Pool Index Writes	The number of times a buffer pool index page was physically written to a disk.
Pool Lns Gap Clns	The number of times a page cleaner was invoked because the used logging space had reached a predefined criterion for the database.
Pool Read Time	The total amount of time spent processing read requests that caused data or index pages to be physically read from a disk or the buffer pool.
Pool Read Time Avg	The average of the total amount of time spent processing read requests that caused data or index pages to be physically read from a disk or the buffer pool.
Pool Total Hit Rate	Total hit rate for the buffer pool.
Pool Total Writes	The number of times writing from the buffer pool to a disk was executed.
Pool Write Time	The total amount of time spent writing data or index pages physically from the buffer pool to a disk.
Pool Write Time Avg	The average of the total amount of time spent writing data or index pages physically from the buffer pool to a disk.

1.12.6 Cache Hit Rate

Overview

The Cache Hit Rate report displays a summary of the cache hit rate on a per-minute basis over the last hour.

Storage Location

Reports/DB2 Universal Database/Troubleshooting/Recent Past/Cache Hit Rate

Record

Cache on Database Interval (PI_DCAI)

Table 1.109 Report Data for Cache Hit Rate

Fields	
Field Name	Description
Catcache Hit Rate	Rate of catalog cache hits.
Pkg Cache Hit Rate	Rate of package cache hits.

1.12.7 Cache Hit Rate Status

Overview

The Cache Hit Rate Status report displays a summary of the cache hit rate on an hourly basis over the last 24 hours.

Storage Location

Reports/DB2 Universal Database/Status Reporting/Daily Trend/Cache Hit Rate Status

Record

Cache on Database Interval (PI_DCAI)

Table 1.110 Report Data for Cache Hit Rate Status

Fields	
Field Name	Description
Catcache Hit Rate	Rate of catalog cache hits.
Pkg Cache Hit Rate	Rate of package cache hits.

1.12.8 Cache Hit Rate Trend

Overview

The Cache Hit Rate Trend report displays a summary of the cache hit rate on a daily basis over the last month.

Storage Location

Reports/DB2 Universal Database/Monthly Trend/Cache Hit Rate Trend

Record

Cache on Database Interval (PI_DCAI)

Table 1.111 Report Data for Cache Hit Rate Trend

Fields	
Field Name	Description
Catcache Hit Rate	Rate of catalog cache hits.
Pkg Cache Hit Rate	Rate of package cache hits.

1.12.9 Cache on Database

Overview

The Cache on Database report displays cache information at the database level, in real time.

Storage Location

Reports/DB2 Universal Database/Troubleshooting/Real Time/Cache on Database

Record

Cache on Database (PD_DCAD)

Table 1.112 Report Data for Cache on Database

Fields	
Field Name	Description
Cat Cache Inserts	The number of times that the system tried to insert table descriptors or authorization information into the catalog cache.
Cat Cache Lookups	The number of times that the catalog cache was referenced in order to obtain table descriptor or authorization information.
Cat Cache Needed Minimize	The minimum size (in pages) for the required catalog cache (4 KB).
Cat Cache Overflows	The number of times that the catalog cache overflowed out of the bounds of its allocated memory.
Cat Cache Size Top	The largest size (in bytes) reached by the catalog cache.
Catcache Hit Rate	Rate of catalog cache hits.
Pkg Cache Hit Rate	Rate of package cache hits.
Pkg Cache Inserts	The total number of times that a requested section was not available for use and had to be loaded into the package cache.
Pkg Cache Lookups	The number of times that an application searched for a section or package in the package cache.
Pkg Cache Needed Minimize	The minimum size (in pages) for the required package cache (4 KB).
Pkg Cache Num Overflows	The number of times that the package cache overflowed out of the bounds of its allocated memory.
Pkg Cache Size Top	The largest size (in bytes) reached by the package cache.

1.12.10 Sort Status on Database

Overview

The Sort Status on Database report displays sort information at the database level, in real time.

Storage Location

Reports/DB2 Universal Database/Status Reporting/Real Time/Sort Status on Database

Record

Sort Status on Database (PD_DSOD)

Table 1.113 Report Data for Sort Status on Database

Fields	
Field Name	Description
Active Sorts	The number of sorts in the database that currently have a sort heap allocated.
Sheapthres	Sort heap threshold.
Sheapthres Shr	Sort heap threshold for shared sorts.
Sort Heap Allocated	The total number of pages of sort heap space allocated for all sorts at the level chosen, at the time the snapshot was taken.
Sort Heap Allocated Avg	The average of the number of pages of sort heap space allocated for all sorts at the level chosen, at the time the snapshot was taken.
Sort Overflows	The total number of sorts that ran out of sort heap and may have required disk space for temporary storage.
Sort Overflows Rate	The ratio of the sorts that ran out of sort heap and may have required disk space for temporary storage.
Sort Shrheap Allocated	Sort shared heap currently allocated.
Sort Shrheap Allocated Rate	Shared sort memory usage of the database.
Sort Shrheap Top	Maximum watermark for the sort shared heap .
Total Sort Time	The total elapsed time for all sorts that have been executed (in milliseconds).
Total Sort Time Avg	The average of the total elapsed time for all sorts that have been executed (in milliseconds).
Total Sorts	The total number of sorts that have been executed.

1.12.11 SQL Statement on Database

Overview

The SQL Statement on Database report displays SQL statement information at the database level, in real time.

Storage Location

Reports/DB2 Universal Database/Troubleshooting/Real Time/SQL Statement on Database

Record

SQL Statement on Database (PD_DSQD)

Table 1.114 Report Data for SQL Statement on Database

Fields	
Field Name	Description
Commit SQL STMTS	The total number of SQL COMMIT statements that have been attempted.
DDL SQL STMTS	The number of SQL Data Definition Language (DDL) statements that were executed.
DDL SQL STMTS Rate	The ratio of the SQL Data Definition Language (DDL) statements that were executed.
Dynamic SQL STMTS	The number of dynamic SQL statements that were attempted.
Failed SQL STMTS	The number of SQL statements that were attempted, but failed.
Priv Workspace Num Overflows	The number of times that the private workspace overflowed out of the bounds of its allocated memory.
Priv Workspace Section Inserts	The number of SQL sections inserted into the private workspace by applications.
Priv Workspace Section Lookups	The number of SQL sections that were referenced by applications in the agent private workspace.
Priv Workspace Size Top	The largest size reached by the private workspace.
Rollback SQL STMTS	The total number of SQL ROLLBACK statements that have been attempted.
Select SQL STMTS	The number of SQL SELECT statements that were executed.
Select SQL STMTS Rate	The ratio of the SELECT statements to all statements.
Shr Workspace Hit Rate	Rate of shared workspace hits.
Shr Workspace Num Overflows	The number of times the shared workspace overflowed out of the bounds of its allocated memory.
Shr Workspace Section Inserts	The number of SQL sections inserted into the shared workspace by applications.
Shr Workspace Section Lookups	The number of SQL sections referenced by applications in the shared workspace.

Shr Workspace Size Top	The maximum size reached by the shared workspace.
Static SQL STMTS	The number of static SQL statements that were attempted.
Throughput SQL STMTS	The total number of successful SQL statements.
UID SQL STMTS	The number of SQL UPDATE, INSERT and DELETE statements that were executed.
UID SQL STMTS Rate	The ratio of the SQL UPDATE, INSERT and DELETE statements that were executed.

Chapter 2 Working with Records

This chapter describes the contents of the records collected by the Agents. You can use Performance Reporter to view the records collected by an Agent, using predefined solution set reports or user-defined reports. For details about the solution set reports provided by each Agent, see Chapter 1.

- Data Model Version (see section 2.1)
- Format of Record Explanations (see section 2.2)
- List of Common Key Fields (see section 2.3)
- Field Values (see section 2.4)
- Fields Added at the Time Data Is Stored in the Store Database (see section 2.5)
- Notes on Collecting Records (see section 2.6)
- Agent for Oracle Records (see section 2.7)
- Agent for Microsoft SQL Server Records (see section 2.8)
- Agent for Microsoft Exchange Server Records (see section 2.9)
- Agent for DB2 Records (see section 2.10)

2.1 Data Model Version

The definitions of an Agent's records and fields are collectively called a *data model*. There is a specific version number for each Agent and its data model, as listed in the following table.

Table 2.1 Version Numbers for Each Agent and Its Data Model

Agent Name	Agent Version	Data Model Version
Agent for Oracle	5.5	5.0
Agent for Microsoft SQL Server	5.5	4.0
Agent for Microsoft Exchange Server	5.5	3.0
Agent for DB2	5.5	5.0

For details about the data model version that corresponds to an Agent whose product version is 5.1 or earlier, see the appendix in the *HiCommand Tuning Manager Agent Administration Guide*. For details about the data model, see the chapter in the *HiCommand Tuning Manager Agent Administration Guide* that provides an overview of the data handled by the Tuning Manager series programs.

2.2 Format of Record Explanations

This chapter describes the records for the Agents in alphabetical order. Each record explanation contains the following items. Explanations and items specific to each Agent are provided under the Agent name.

Function

Provides an overview of the performance data that is stored in the record and includes important notes.

Default and Changeable Values

Consists of a table listing default values of the performance data collection conditions that are defined for the record, and indicating whether the user can change the values. You can use Performance Reporter's `jpcasrec output` command to output, to a file, the values of data collection conditions for each record. You can also use Performance Reporter's `jpcasrec update` command to change the value of data collection conditions. For details about the `jpcasrec output` and `jpcasrec update` commands, see the *HiCommand Tuning Manager Command Line Interface Guide*.

The *Default and Changeable Values* table for each record consists of the following items:

- Collection Interval

Indicates the performance data collection interval (in seconds). The default value is recommended. Specify one of the following if you wish to change the value:

- 0
- A value from 60 to 3,600 that is a multiple of 60, and is also a whole divisor of 3,600
- A value from 3,600 to 86,400 that is a multiple of 3,600, and is also a whole divisor of 86,400

If a value other than those described above is specified, performance data might not be stored properly. If 0 is set, performance data will not be collected.

- Collection Offset

Indicates the offset value (in seconds) used to shift the start time for collecting performance data for each record. If a number of records collect data at the same time, the load on the hardware and programs to be monitored may greatly increase. This offset value can be used to disperse the load caused by the collection. If you wish to change this value, specify a value from 0 to 32,767 (in seconds, and within the range specified in Collection Interval), considering the load caused by the collection processing.

- Log

Indicates whether to collect performance data to be stored in the Store database. Specify one of the following values:

- Yes: Collect (however, if Collection Interval is set to 0, performance data is not collected)
- No: Do not collect

- LOGIF

Indicates conditions for storing collected performance data in the Store database.

Key Fields

Indicates the field that works as a key to identify an instance of a multi-instance record, in *view-name (manager-name)* format. There are two types of key fields: those common to all records, and those unique to a record. *Key fields* indicates the key fields unique to a record. For details about key fields common to all records, see section 2.3.

Lifetime

Indicates the period during which consistency is guaranteed for the performance data that is collected in the record. For details about the lifetime, see the chapter that provides an overview of the data handled by the Tuning Manager series programs, in the *HiCommand Tuning Manager Agent Administration Guide*.

Record Size

Indicates the amount of performance data that can be collected and stored in a record at one time. In a multi-instance record, values are given for both the fixed part and variable part. In a record other than a multi-instance record, the value for the variable part is always 0. Estimate the Store database size by using these values. For details about how to calculate this size, see the *HiCommand Tuning Manager Agent Administration Guide*.

Fields

Provides a table that describes the fields of each record. The table contains the following items:

- View Name (Manager Name)

- View Name

The field name displayed by Performance Reporter.

- Manager Name

The field name used in the programs of the Tuning Manager series.

- Description

Explanation of the value stored in the field. Agent for DB2, refer to the DB2 documentation for details. Agent for Oracle and Agent for Microsoft SQL Server, notes #1 and #2 in the table indicate the following:

#1: A value in this field is the latest monitored value that the OS returns at the time of data collection.

#2: When this field is displayed in the historical report, the *View Name (Total)* field is added.

For each field, the following methods of calculating performance data are available:

- Calculations (such as averages or percentages) based on data collected in the current and previous intervals.

- Calculations based on data collected in the current interval only. This data includes the values accumulated internally by the OS (the data marked as #1 in the table).
- Calculations based on data in other fields (See **Data source** in the table of each record's fields.)

Unless otherwise noted, the value in each field is an unprocessed value that was collected during a data collection interval.

The following types of values are displayed in a historical report when records of the PI record type are summarized and displayed while the report interval setting is not "minute":

- The average value for the summarized interval
- The last collected value
- The sum total of values
- The minimum value
- The maximum value

Unless otherwise noted, the value in each field displays the average for the summarized interval.

- **Format**

Data type of the field value, such as `char` or `float`. For details about data types, see section 2.4.1.

- **Delta**

If this item is `YES`, you can switch the display of the real-time report from a differential value to a cumulative value. If this item is `NO`, you cannot switch the value. For details about delta, see section 2.4.2.

- **Supported Version (in Agent for Oracle and Agent for DB2)**

Indicates the database version supported by the field.

If a version number is shown, the field is supported by that version and all subsequent versions. **All** means that all database versions are supported by the field. **Not supported** means that the field is not supported by the database.

- **Restriction (in Agent for DB2)**

Indicates the presence or absence of restrictions for the corresponding field value. For information on field value restrictions, see section 2.4.3.

- **Data Source**

Source of the obtained value or the calculation of the value. For information on Data Source, see section 2.4.4.

2.3 List of Common Key Fields

Table 2.2 lists key fields that are common to all records. For details about key fields specific to a particular record, see the description of each record.

Table 2.2 Common Key Fields

View Name (Manager Name)	Description
Agent Host (DEVICEID)	Names of the instance and host on which the Agent is running
Agent Instance (PROD_INST)	Instance name of the Agent
Agent Type (PRODID)	Product ID of the Agent
Date (DATE)	Record creation date (GMT)
Date and Time (DATETIME)	Combination of the DATE and TIME fields
Drawer Type (DRAWER_TYPE)	Drawer type. Valid values are as follows: m: Minute H: Hour D: Day w: Week M: Month Y: Year
Record Type (INPUT_RECORD_TYPE)	A 4-byte identifier indicating the record type
Time (TIME)	The time when the record was created (GMT)

2.4 Field Values

This section describes the values stored in the fields.

2.4.1 List of Data Types

Table 2.3 lists the data types for field values and the corresponding C and C++ data types. The values shown in the **Format** column of the each field table are those shown below in the **Field** column under **Data Type**.

Table 2.3 Data Types

Data Type		Bytes	Description
Field	C or C++		
char(<i>n</i>)	char()	1	Character data (0x20 to 0x7e)
double	double	8	Numeric value (1.7E±308 (15 digits))
float	float	4	Numeric value (3.4E±38 (7 digits))
long	long	4	Numeric value (-2,147,483,648 to 2,147,483,647)
short	short	2	Numeric value (-32,768 to 32,767)
string(<i>n</i>)	char[]	Number in parentheses	Character string with a length of <i>n</i> bytes (characters other than 7-bit ASCII characters cannot be stored). The last character is null.
time_t	unsigned long	4	Numeric value (0 to 4,294,967,295)
timeval	Structure	8	Numeric value (first 4 bytes are seconds, next 4 bytes are microseconds)
ulong	unsigned long	4	Numeric value (0 to 4,294,967,295)
ushort	unsigned short	2	Numeric value (0 to 65,535)
utime	Structure	8	Numeric value (first 4 bytes are seconds, next 4 bytes are microseconds)
word	unsigned short	2	Numeric value (0 to 65,535)

2.4.2 Delta

Displaying the difference between the values of the previously collected data and currently collected data for the performance data of a field is called **delta**. The data source of the field is the information which is managed as cumulative values.

For example, suppose a field whose data source is a counter for I/O processing, where the counter value obtained during the first collection is 3 and the counter value obtained during the second collection is 7. The output value of this field at the second collection is 7 (the counter value at the second collection) if the delta attribute is not applied to the field, or 4 (the difference between the first value and the second value) if the delta attribute is applied to the field.

Data displayed with Performance Reporter varies as indicated in Table 2.4.

Note: One of the following settings is made in Performance Reporter:

- The **Indicate delta value** checkbox is selected in the New Report > Indication Settings (Realtime) window.
- The **Indicate delta value** checkbox is selected in the Show Options window for a real-time report.
- TRUE is assigned to the `indicate-delta-value` attribute of `realtime-indication-settings`, in the parameter file passed in an argument to the `jpcrdef create` command.

Table 2.4 Delta Characteristics of Collected Performance Data

Record Type	Delta	Report Type	Value of Delta is Set to be Displayed (see <i>Note</i>)	Record Value
PI record type	Yes	Real-time report	Yes	The amount changed
			No	Agent for Oracle and Agent for Microsoft SQL Server, the amount of change is displayed. Agent for Microsoft Exchange Server and Agent for DB2, the value at the time of collection is displayed.
		<ul style="list-style-type: none"> ▪ Historical report ▪ Monitoring data for alarms 	Not applicable	The amount changed
	No	Real-time report	Yes	The value at the time of collection
			No	
		<ul style="list-style-type: none"> ▪ Historical report ▪ Monitoring data for alarms 	Not applicable	

PD record type	Yes	Real-time report	Yes	Agent for Oracle and Agent for Microsoft SQL Server, the amount of change is displayed. Agent for Microsoft Exchange Server and Agent for DB2, the value at the time of collection is displayed.
			No	Agent for Oracle and Agent for Microsoft SQL Server, the cumulative value is displayed. Agent for Microsoft Exchange Server and Agent for DB2, the value at the time of collection is displayed.
		<ul style="list-style-type: none"> ▪ Historical report ▪ Monitoring data for alarms 	Not applicable	Agent for Oracle and Agent for Microsoft SQL Server, the cumulative value is displayed. Agent for Microsoft Exchange Server and Agent for DB2, the value at the time of collection is displayed.
	No	Real-time report	Yes	The value at the time of collection
			No	
		<ul style="list-style-type: none"> ▪ Historical report ▪ Monitoring data for alarms 	Not applicable	

Please review the following points about the collection of performance data:

Agent for Oracle and Agent for DB2:

- At the time you use Performance Reporter's `jpcasrec update` command to set Collection Interval, performance data is not collected.
- Since historical data of the PI record type includes data (such as delta values) that requires differences from data obtained during the previous collection, data from two or more collections is required. This means that the time required to store historical data into the Store database (from the time the Agent service started or the time that Collection Interval is set by executing the `jpcasrec update` command) is, at a maximum, twice the time that is set in Collection Interval.

For example, if you start, at 6:32 PM, the Agent whose performance data collection interval is set to 300 seconds (5 minutes), the first data collection will start at 6:35 PM. However, the record to be stored in the Store database is not created at this time because the data required for calculating the difference does not exist. At the next data collection (that starts at 6:40 PM), historical data will be created based on the data collected at 6:35 PM and 6:40 PM, and stored in the Store database.

- Starting with the first collection, a real-time report displays data values. Note, however, that 0 is displayed as the first collected value in reports requiring previously collected data. The values displayed from the second and subsequent data collections vary depending on the report.

- In the following cases, the value of the collected data is displayed, at the time of the second collection and for all subsequent data collections.
 - In a real-time report of the PI record type, when a delta value is not set to be displayed.
 - In a real-time report of the PD record type, when a delta value is set to be displayed.
- In the following case, the difference between the data obtained at the first and second collections is displayed at the time of the second collection. For the third collection and all subsequent data collections, the value of the collected data is displayed.
 - In a real-time report of the PI record type, when a delta value is set to be displayed.

Agent for Microsoft SQL Server:

In the following cases, a real-time report displays data values obtained at the first collection.

- In a real-time report of the PI record type, when a delta value is not set to be displayed.
- In a real-time report of the PD record type, when a delta value is set to be displayed.

Note, however, that 0 is displayed as the first collected value in reports requiring previously collected data. For the second collection and all subsequent data collections, a real-time report displays the difference between the values of the previously collected data and the currently collected data.

2.4.3 Restriction (in Agent for DB2)

Each field contains a value obtained from DB2 for the monitoring target, or a value based on other such values and calculated according to a given formula. The presence or absence of restrictions for the field value is indicated in the *Restriction* column.

- **When two hyphens (--) are shown**

There is no restriction on the value of each field.

- **When Y is shown**

Depending on the monitoring target, the value data obtained from DB2 may exceed 32 bits. When the data exceeds 32 bits, there is a restriction on the value stored in the field. In this case, the following message is output to the common message log:
KAVF29019-W An overflow error has occurred.

For example, if the value 0x1122334455667788 has been obtained, the value inserted in the field will be as indicated in the following table.

Table 2.5 Examples of Restrictions on the Value Inserted in a Field

OS	Data Storage Method	Higher Address	Lower Address	Value Stored in the Field
AIX® (pSeries)	Big-endian architecture	0x11 0x22 0x33 0x44	0x55 0x66 0x77 0x88	0x55 0x66 0x77 0x88
Linux® 3	Little-endian architecture	0x55 0x66 0x77 0x88	0x11 0x22 0x33 0x44	0x55 0x66 0x77 0x88

2.4.4 Data Source

Each field contains a value obtained from a Tuning Manager product or program being monitored or a value derived from applying a formula. In the tables, the **Data source** column indicates the source of the value or the formula used to produce the value.

When a field's value is obtained by processing performance data acquired from an Agent, the character string in the **Data source** column indicates the method used to obtain the value that is set in the field. The following shows examples for each Agent:

2.4.4.1 Agent for Oracle

- **When uppercase characters are shown:**

Uppercase characters indicate the table name of the Oracle database when an Oracle database is accessed using the Oracle OCI (Oracle Call Interface). For example, the Cursor Open Hits (CURSOR_OPEN_HITS) field of the Activity Summary (PD_PDAS) record stores the value that is collected using OCI of Oracle. For details about tables, refer to the Oracle manuals.

- **When lowercase characters are shown:**

Lowercase characters indicate the key character string used to acquire the performance data that is stored in the Oracle database table.

For example, the Calls/Tran (CALLS_PER_TRANSACTION) field of the System Stat Summary (PD) record stores the value that is obtained by dividing the value obtained from `user calls` in the Name column of the `v$SYSSTAT` table by the value obtained from `user commits` in the Name column of the `v$SYSSTAT` table.

- When **Agent Collector** is shown:

Agent Collector means that the value stored in the field was obtained from the Agent Collector service.

- When **init.ora parameter name** is shown:

init.ora parameter name means that the value of the parameter name that is set in the `init.ora` Oracle initialization parameter file is used.

2.4.4.2 Agent for Microsoft SQL Server

- When uppercase characters are shown:

If the character string starts with **DBCC**, the character string indicates a DBCC statement of Microsoft SQL Server. If the character string starts with other characters, the character string indicates the manager name of the field in the same record.

- When characters other than the formula are shown:

The character string indicates the system table name of Microsoft SQL Server, or the Transact-SQL command batch used to acquire data.

2.4.4.3 Agent for Microsoft Exchange Server

- When all uppercase characters are used (e.g., `RECORD_TIME`):

Uppercase characters indicate the key character string used to acquire the performance data stored in Microsoft Exchange Server.

- When lowercase characters are used (but the first character of a word might be uppercase: e.g., `Page File Bytes`):

Lowercase characters indicate the name of the Windows[®] performance counter for which performance data was collected.

2.4.4.4 Agent for DB2

- When uppercase characters are shown:

Uppercase characters indicate the key character string used to acquire the performance data that is stored in the DB2.

- When **Agent Collector** is shown:

Agent Collector means that the value stored in the field was obtained from the Agent Collector service.

2.5 Fields Added at the Time Data Is Stored in the Store Database

The following table lists the fields that are added at the time data is stored in the Store database. These fields are supported by all monitored targets of each Agent.

Table 2.6 Fields that Are Added at the Time Data Is Stored in the Store Database

View Name (Manager Name)	Description	Format	Delta
Agent Host (DEVICEID)	Names of the instance and host on which the Agent is running. The format is as follows: <i>instance-name{host-name}</i>	string(256)	No
Agent Instance (PROD_INST)	Instance name of the Agent	string(256)	No
Agent Type (PRODID)	Product ID of the Agent (1-byte identifier)	char	No
Date (DATE)	Record creation date (GMT) See <i>Note 1</i> and <i>Note 2</i>	char(3)	No
Date and Time (DATETIME)	Combination of the Date (DATE) and Time (TIME) fields See <i>Note 1</i>	char(6)	No
Drawer Type (DRAWER_TYPE)	For a record of the PI record type, the data summarization type	char	No
GMT Offset (GMT_ADJUST)	Difference (in seconds) between GMT and local time	long	No
Time (TIME)	Record creation time (GMT) See <i>Note 1</i> and <i>Note 2</i>	char(3)	No

Note 1: When the performance data is displayed in the Performance Reporter reports, the Date field is displayed in *YYYYMMDD* format, the Date and Time field is displayed in *YYYYMMDD hh:mm:ss* format, and the Time field is displayed in *hh.mm.ss* format.

Note 2: Records of the PI record type summarize data from a specified period of time. The value set in this field indicates the beginning of that period. The following table lists the values set for each record type.

Table 2.7 Values Set for Each PI Record Type

Type	Values Set for Each Record Type
Minute	The beginning (0 second) of the minute for which the record was created.
Hour	The beginning (0 minute and 0 second) of the hour for which the record was created.
Day	The beginning (0 hour, 0 minute, and 0 second, AM) of the day for which the record was created.
Week	The beginning (0 hour, 0 minute, and 0 second, AM on Monday) of the week for which the record was created.
Month	The beginning (0 hour, 0 minute, and 0 second, AM on the 1 st) of the month for which the record was created.
Year	The beginning (0 hour, 0 minute, and 0 second, AM on January 1 st) of the year for which the record was created.

2.6 Notes on Collecting Records

Notes on collecting records are as follows:

2.6.1 Agent for Oracle

2.6.1.1 For a System Consisting of Oracle 8.1.7 or Later

If a system consisting of Oracle 8.1.7 or later contains even one product that is for Oracle 8.1.6 or earlier, the value of the Program field in Open Cursor (PD_PDOC) and Session Detail (PD_PDS) records might become null or ?.

2.6.1.2 When Oracle 10g® Is Monitored

When Oracle 10g is monitored, the value of the Addr field in the Latch (PD_PDLA) and Latch Interval (PI_PILA) records becomes invalid.

2.6.1.3 When Monitoring Databases That Have Many Data Segments

When a monitored database has many data segments, Tuning Manager might be unable to display data in the database. In such a case, enable the collection field switching option.

Enabling this option changes the SQL statements when collecting the data of the following records and avoids this problem.

- Tablespace (PD_PDTS)
- Database Interval (PI_PIDB)

The following table lists the environment variables for enabling this option.

Table 2.8 Environment Variables for Enabling the Collection Field Switching Option

Environment Variable Name	Value That Can Be Set	Description	Default
HTM_ORASET_SQL_OPTION	ON or OFF	ON: Enables the option. OFF: Disables the option.	OFF
HTM_ORASET_NUMERIC_10	0 to 99999	This variable specifies the value to be set in the fields for which data is not collected when HTM_ORASET_SQL_OPTION is ON.	0

Note: When HTM_ORASET_SQL_OPTION is set to ON, data for the following fields are not collected, and the value specified in HTM_ORASET_NUMERIC_10 is set.

Table 2.9 Fields for Which the Value Specified in HTM_ORASET_NUMERIC_10 Will Be Set

Record Name (Record ID)	Field Name
Tablespace (PD_PDTs)	Segments
	Extents
Database Interval (PI_PIDB)	Blocks
	DB Files %
	Datafiles (See <i>Note</i>)
	Extents
	Free %
	Free Change
	Free Extents
	Free Mbytes
	High Max Extent (See <i>Note</i>)
	I/O Ops/sec
	Links (See <i>Note</i>)
	Links In Tran (See <i>Note</i>)
	Links Logged On (See <i>Note</i>)
	Links Open Cursors (See <i>Note</i>)
Log Files %	
Mbytes	
Next Alloc Fails (See <i>Note</i>)	
Overextended (See <i>Note</i>)	
Reads/sec	
Redo Files (See <i>Note</i>)	
Rollback Segments (See <i>Note</i>)	
Rollback Segments Hit %	
Rollback Segments Trans	
Segments	
Sort Segments (See <i>Note</i>)	
Sorting Users (See <i>Note</i>)	
Tablespaces (See <i>Note</i>)	
Used Change	
Used Mbytes	
Write %	
Database Interval (PI_PIDB)	Writes/sec

Note: This field is of the short type. Therefore, if `HTM_ORASET_NUMERIC_10` is set to a value from 32768 to 99999, 32767, which is the maximum value of the short type, is set.

When `HTM_ORASET_SQL_OPTION` is set to `ON`, the following fields of the Database Interval (`PI_PIDB`) record are always 0 because the value of the fields is the difference from the previously collected value:

- Physical Blocks Read
- Physical Blocks Written
- Physical Reads
- Physical Writes

To enable the collection field switching option:

1. Set the `HTM_ORASET_SQL_OPTION` environment variable to `ON`.
2. If you do not want to accept 0 as the default value to be set in the fields for which data is not collected (see Table 2.9), set the `HTM_ORASET_NUMERIC_10` environment variable to the desired value.
3. Using the prompt from which you set the environment variable, start the Agent for Oracle services.

If you start the services from a different prompt, the environment variable does not take effect.

2.6.1.4 Notes on Specific Records

If you attempt to acquire the following records, you have to be careful because the CPU usage rate and the CPU I/O Wait value for Oracle Database might become high:

- Cache Summary (`PD_PDCS`)
- Cache Summary Interval (`PI_PICS`)
- Shared Cursor Cache (`PD_PDC`)
- SQL Text - Performance Based (`PD_PDES`)

2.6.1.5 Record Generation Result When Data Cannot Be Obtained

The following describes record creation results in cases where the data to be stored in a field cannot be obtained.

Records are not created when Agent for Oracle cannot:

- Acquire the performance data to be stored in a field defined as a key field.
- Acquire the performance data to be stored in a field that indicates the Oracle performance value.
- Generate a record within the time set for Collection Interval.

2.6.1.6 Permissions Required for Collecting Performance Data

Agent for Oracle requires the following permissions to acquire performance data from Oracle Database:

- CREATE SESSION
- SELECT ANY DICTIONARY
- SELECT ANY TABLE
- INSERT ANY TABLE
- UPDATE ANY TABLE
- DELETE ANY TABLE
- CREATE ANY INDEX
- ALTER ANY INDEX

Table 2.10 describes the reasons why the above permissions are required.

Table 2.10 Permissions Required for Collecting Performance Data, and Why They Are Required

Permission	Required for:
CREATE SESSION	Establishing a session for Oracle Database being monitored.
SELECT ANY DICTIONARY# SELECT ANY TABLE	Acquiring performance data for the Oracle Database being monitored. Agent for Oracle uses the following methods to acquire performance data: Directly acquiring performance data from an Oracle static dictionary (DBA_XXXX) or dynamic dictionary (v\$XXXX) Calling the monitoring procedure that was registered in Oracle Database during setup of Agent for Oracle. Performance data is then collected from the static dictionary or dynamic dictionary in the monitoring procedure.
SELECT ANY DICTIONARY# SELECT ANY TABLE INSERT ANY TABLE UPDATE ANY TABLE DELETE ANY TABLE CREATE ANY INDEX ALTER ANY INDEX	Acquiring the Explain Plan field in the PD_PDSQ record. The data for the Explain Plan field is acquired by using the explain plan query, and is stored in the LSC_13_PLAN_TABLE table. The stored data is used as a field value.

#

The SELECT ANY DICTIONARY system permission is required only when Oracle9i or Oracle 10g is being monitored.

Minimizing the permissions given to the user account when performance data is collected

- When Agent for Oracle acquires the SQL Text (PD_PDSQ)^{#1} record, the user account requires eight permissions. However, when the PD_PDSQ record is not acquired, the user account only requires three permissions.

Permissions required for collecting the PD_PDSQ record:

- CREATE SESSION
- SELECT ANY DICTIONARY^{#2}
- SELECT ANY TABLE
- INSERT ANY TABLE
- UPDATE ANY TABLE
- DELETE ANY TABLE
- CREATE ANY INDEX
- ALTER ANY INDEX

Permissions required for collecting records other than PD_PDSQ:

- CREATE SESSION
- SELECT ANY DICTIONARY^{#2}
- SELECT ANY TABLE

You can minimize the permissions given to the user account by setting up operation so that the PD_PDSQ record is not acquired.

- When `mk_user.sql` is executed to create a user account, the created account has all the following eight permissions:

- CREATE SESSION
- SELECT ANY DICTIONARY^{#2}
- SELECT ANY TABLE
- INSERT ANY TABLE
- UPDATE ANY TABLE
- DELETE ANY TABLE
- CREATE ANY INDEX
- ALTER ANY INDEX

If you do not use `mk_user.sql` to create a user account, you can limit the permissions given to the user account to the necessary minimum.

#1

By default, PD_PDSQ is not acquired.

#2

The SELECT ANY DICTIONARY system permission is required when Oracle9i or Oracle 10g is being monitored.

2.6.2 Agent for Microsoft SQL Server

2.6.2.1 When Records Are Not Created

If any database constituting the target Microsoft SQL Server is placed offline, the records listed below are not created; to create these records, you must place the applicable database online:

- Database Detail (PD_DD)
- Database Interval (PI_DI)
- Database Replication Detail (PD_RD)
- Database Space Detail (PD_DS)
- Replication Published Database Overview (PI_RPDB)
- Replication Summary Detail (PD_RS)
- Server Space Detail (PD_SS)
- Server Space Interval (PI_SI)

Also, if there is a database that has 2 TB of data or more in the target Microsoft SQL Server, the records listed above and the Server Detail (PD) record are not created. To avoid this problem, register the `A4QHITACHIPROCSPDATABASES` stored procedure to the target Microsoft SQL Server. For details about how to register or delete this stored procedure, see the chapter that describes the setup of Agent for Microsoft SQL Server in the *HiCommand Tuning Manager Installation Guide*.

2.6.2.2 When the Correct Value is not Displayed in the Field

With Microsoft SQL Server, the database usage volume is not updated when there are not enough transactions. If minor transactions result in a significant change in the database usage volume, the correct values may not be obtained for the record fields listed below. If this has occurred, execute the `DBCC UPDATEUSAGE` command on the database to display the correct values. For details about the `DBCC UPDATEUSAGE` command and how to execute it, refer to the Microsoft SQL Server manual.

Table 2.11 Records for Which Correct Values Might Not Be Displayed in the Field

Record Name (Record ID)	View Name (Manager Name)
Database Interval (PI_DI)	Data Growth % (DATA_GROWTH)
	Index Growth % (IDX_GROWTH)
Database Space Detail (PD_DS)	Data Mbytes (DATA)
	Free % (PERC_FREE)
	Free Mbytes (FREE_SPACE)
	Index Mbytes (IDX)
	Rsvd Mbytes (RESERVED)
	Unused % (PERC_USED)
	Unused Mbytes (UNUSED)
Server Space Detail (PD_SS)	Data Mbytes (DATA)
	Free % (PERC_FREE)
	Free Mbytes (FREE_SPACE)
	Index Mbytes (IDX)
	Rsvd Mbytes (RESERVED)
	Unused % (PERC_USED)
	Unused Mbytes (UNUSED)
Server Space Interval (PI_SI)	Data Mbytes (DATA)
	Free % (PERC_FREE)
	Free Mbytes (FREE_SPACE)
	Index Mbytes (IDX)
	Rsvd Mbytes (RESERVED)
	Unused % (PERC_USED)
	Unused Mbytes (UNUSED)

2.6.2.3 Record Generation Result When Data Cannot Be Obtained

The following describes record creation results in cases where the data to be stored in a field cannot be obtained. If an error occurs during performance data collection, or if a field that is not supported by the monitored system is included in the created record, the record creation results are as follows:

- Records are not created.

Records are not created when Agent for Microsoft SQL Server cannot:

- Acquire the performance data to be stored in a field defined as a key field.
- Acquire the performance data to be stored in a field that indicates the Microsoft SQL Server performance value.
- Generate a record within the time set for Collection Interval.

- Records are created containing blank fields.

Records are created containing blank fields when Agent for Microsoft SQL Server:

- Fails to acquire character-type data.
- Acquires character-type data containing no characters.

- Records are created containing fields with the value `-1`.

Records containing fields with the value `-1` are created when Agent for Microsoft SQL Server failed to collect numeric-type configuration data.

- Records are created containing fields with the value `Unknown`.

Records are created containing fields with the value `Unknown` when Agent for Microsoft SQL Server:

- Acquires performance data that is not defined in the data model, for a field that is defined in the data model.
- Fails to acquire data for a field that is defined in the data model.

2.6.2.4 Records That Cannot Be Created During Execution of a Failover in a Mirroring

Configuration

The following records are not created during execution of a failover in a mirroring configuration. **Note:** An error that occurs during creation of a record will not be reported by an alarm.

1. Database Detail (PD_DD)
2. Database Interval (PI_DI)
3. Database Replication Detail (PD_RD)
4. Database Space Detail (PD_DS)
5. Replication Published Database Overview (PI_RPDB)
6. Replication Summary Detail (PD_RS)
7. Server Space Detail (PD_SS)
8. Server Space Interval (PI_SI)
9. Server Detail (PD)[#]

#

An error occurs if any of the records indicated by 1 to 8 is collected at the same time as a history.

Since the above records hold information about the database, information about the database cannot be created during execution of a failover.

2.6.3 Agent for Microsoft Exchange Server

2.6.3.1 Precaution Before Collecting Performance Information

To use Agent for Microsoft Exchange Server to collect performance data, you must install Microsoft Exchange Server before starting the Agent Collector service. In addition, the service that was added during installation must have started normally. If installation of Microsoft Exchange Server fails or if the added service has stopped, the field value cannot be acquired or 0 is displayed, among other possibilities.

2.6.3.2 Application Event Log When a Record Is Not Created Successfully

If the event shown in Table 2.12 has been recorded in the application event log, the record corresponding to the service indicated in *service-name* is not created. This problem occurs when the service has not been installed correctly.

To create the record, re-install the service for which the problem occurred. Alternatively, contact the developer of the service to determine the action you should take, and then correct the environment so that the application event log will not be recorded.

Table 2.12 Application Event Log When a Record Is Not Collected Successfully

Event ID	Source	Event Log Contents
1008	Perflib	The Open procedure for <i>service-name</i> (DLL <i>DLL-file-name-for-the-service</i>) has failed. Performance data for this service is not available.

Table 2.13 lists the Agent for Microsoft Exchange Server records and the corresponding services.

Table 2.13 Agent for Microsoft Exchange Server Records and Corresponding Services

Record Name	Record ID	Corresponding Services
Database	PI_DB	ESE
Epoxy	PI_EPOX	ExIPC
MSExchangeIS	PI	MSExchangeIS
MSExchangeIS Mailbox	PI_ISM	
MSExchangeIS Public	PI_ISP	
Process	PD	PerfProc

2.6.3.3 Note on Multi-Instance Records

For multi-instance records whose instance name is `_Total`, the sum total of values or average value for all instances is collected as the record value. If instance information is changed during a collection interval, the values might be inconsistent.

2.6.3.4 Record Generation Result When Data Cannot Be Obtained

The following describes record creation results in cases where the data to be stored in a field cannot be obtained.

Records are not created when Agent for Microsoft Exchange Server cannot:

- Acquire the performance data to be stored in a field that is defined as a key field.
- Acquire the performance data to be stored in a field that indicates the Microsoft Exchange Server performance value.
- Generate a record within the time set for Collection Interval.

2.6.4 Agent for DB2

2.6.4.1 Record Generation Result When Data Cannot Be Obtained

The following describes record creation results in cases where the data to be stored in a field cannot be obtained.

Records are not created when Agent for DB2 cannot:

- Acquire the performance data to be stored in a field that indicates the DB2 performance value.
- Generate a record within the time set for Collection Interval.

2.7 Agent for Oracle Records

Table 2.14 lists the records that can be collected by the Agent for Oracle and the information that is stored in each record.

Table 2.14 Agent for Oracle Records

Record Name	Record ID	Information Stored in Record
Activity Summary	PD_PDAS	Performance data indicating the operating status (at a specific point in time) of the Oracle system.
Backup Async IO	PD_PDBA	Performance data indicating the status (at a specific point in time) of a file that was backed up or restored with asynchronous I/O operations and which currently is being or has been executed by the Oracle recovery manager (RMAN).
Backup Sync IO	PD_PDBS	Performance data indicating the status (at a specific point in time) of a file that was backed up or restored with synchronous I/O operations and which currently is being or has been executed by the Oracle recovery manager (RMAN).
Block Contention Interval	PI_PIBC	Performance data, taken at specific intervals, about each wait class.
Block Contention Statistics	PD_PDBC	Performance data indicating the status (at a specific point in time) of each wait class.
Buffer Pool	PD_PDBP	Performance data indicating the status (at a specific point in time) of the buffer pool available to instances.
Cache Summary	PD_PDCS	Performance data indicating the status (at a specific point in time) of each cache in the system global area (SGA).
Cache Summary Interval	PI_PICS	Performance data, taken at specific intervals, about each cache in the system global area (SGA).
Circuit	PD_PDCI	Performance data indicating the status (at a specific point in time) of circuits.
Control File	PD_PDCF	Performance data indicating the status (at a specific point in time) of a control file.
Current Sessions Stat Summary	PD_PDS3	Performance data indicating the status (at a specific point in time) of all active sessions for instance.
Data Dictionary Cache	PD_PDDD	Performance data indicating the usage (at a specific point in time) of the data dictionary cache.
Data Dictionary Cache Interval	PI_PIDD	Performance data, taken at specific intervals, about the usage of the data dictionary cache.
Data File	PD_PDDF	Performance data indicating the status (at a specific point in time) of data files.
Data File Interval	PI_PIDF	Performance data, taken at specific intervals, about data files.
Database	PD_PDDB	Performance data, taken at a specific point in time, indicating the following: <ul style="list-style-type: none"> ▪ General information about a database ▪ Statistical information on table spaces ▪ Statistical information on data files
Database Interval	PI_PIDB	Performance data, taken at specific intervals, about a database.

Database Link	PD_PDDL	This record is reserved and unavailable.
Database Object Cache	PD_PDDO	Performance data indicating the status (at a specific point in time) of database objects in the library cache.
Dispatcher	PD_PDDS	Performance data indicating the status (at a specific point in time) of dispatcher processes.
Dispatcher Interval	PI_PIDS	Performance data, taken at specific intervals, about dispatcher processes.
Errorlog Detail	PD_PDEL	Performance data indicating the status (at a specific point in time) of error messages in the database alert file.
GCS Stat Summary	PD_PDGC	Performance data indicating the status (at a specific point in time) of the Global Cache Service (GCS).
GCS Stat Summary Interval	PI_PIGC	Performance data, taken at specific intervals, about the Global Cache Service (GCS).
Instance	PD_PDI	Performance data indicating the status (at a specific point in time) of an instance.
Latch	PD_PDLA	Performance data indicating the status (at a specific point in time) of latches.
Latch Interval	PI_PILA	Performance data, taken at specific intervals, about latches.
Library Cache	PD_PDLC	Performance data indicating the status (at a specific point in time) of library cache management.
Library Cache Interval	PI_PILC	Performance data, taken at specific intervals, about library cache management.
Lock	PD_PDLO	Performance data indicating the status (at a specific point in time) of locks.
Lock Activity Interval	PI_PIPL	Performance data, taken at specific intervals, about PCM lock conversions that have occurred.
Lock Interval	PI_PILO	Performance data, taken at specific intervals, about locks.
Lock Waiters	PD_PDLW	Performance data indicating the status (at a specific point in time) of all sessions waiting for lock and holding lock.
Multi - Threaded Server	PD_PDMT	Performance data indicating the status (at a specific point in time) of the multi-thread server (MTS) options.
Multi - Threaded Server Interval	PI_PIMT	Performance data, taken at specific intervals, about the multi-thread server (MTS) options.
Open Cursor	PD_PDOC	Performance data indicating the status (at a specific point in time) of cursors.
Options Installed	PD_PDO	Performance data indicating the status (at a specific point in time) of the software options installed at the Oracle Server.
Parallel Query Server	PD_PDPQ	Performance data indicating the status (at a specific point in time) of parallel query servers.
Parallel Query Server Interval	PI_PIPQ	Performance data, taken at specific intervals, about parallel query servers.
Parallel Query Statistics	PD_PDPS	Performance data indicating the status (at a specific point in time) of parallel query options.
Parameter Values	PD_PDP	Performance data indicating the status (at a specific point in time) of current parameter values.
Ping Activity Interval	PI_PIPP	This record is reserved and unavailable.

Process Detail	PD_PDOP	Performance data indicating the status (at a specific point in time) of processes.
Queue Statistics	PD_PDQU	Performance data indicating the status (at a specific point in time) of queues.
Resource Limit	PD_PDRL	Performance data indicating the usage (at a specific point in time) of system global resources.
Rollback Segment	PD_PDRS	Performance data indicating the status (at a specific point in time) of each rollback segment in a database.
Rollback Segment Interval	PI_PIRS	Performance data, taken at specific intervals, about each rollback segment in a database.
Segment Detail	PD_PDSM	Performance data indicating the status (at a specific point in time) of database segments.
Server Status	PD_STAT	Performance data indicating the status (at a specific point in time) of the Oracle server.
Session Detail	PD_PDS	Performance data indicating the status (at a specific point in time) of sessions.
Session Event	PD_PDEV	Performance data indicating the status (at a specific point in time) of session events.
Session Event Interval	PI_PIEV	Performance data, taken at specific intervals, about session events.
Session I/O Interval	PI_PIIO	Performance data, taken at specific intervals, about input/output of all active sessions.
Session Stat Summary Interval	PI_PIS2	Performance data, taken at specific intervals, about each session and performance indicator of an instance.
Session Statistics	PD_PDSS	Performance data indicating the status (at a specific point in time) of sessions.
Session Statistics Summary	PD_PDS2	Performance data indicating the status (at a specific point in time) of each session and performance indicator of an instance.
Session Wait	PD_PDWA	Performance data indicating the status (at a specific point in time) of the session waits.
SGA Components	PD_PDSG	Performance data indicating the status (at a specific point in time) of the system global area (SGA).
Shared Cursor Cache	PD_PDC	Performance data indicating the status (at a specific point in time) of the shared cursor cache.
Shared Server	PD_PDSH	Performance data indicating the status (at a specific point in time) of the shared servers.
Shared Server Interval	PI_PISH	Performance data, taken at specific intervals, about the shared servers.
Sort Segment	PD_PDSR	Performance data indicating the status (at a specific point in time) of sort segments in a database.
Sort Segment Interval	PI_PISR	Performance data, taken at specific intervals, about sort segments in a database.
SQL Text	PD_PDSQ	Performance data indicating the status (at a specific point in time) of the SQL text for a cursor in the shared cursor cache.
SQL Text - Performance Based	PD_PDES	Performance data indicating the status (at a specific point in time) of the SQL text for an SQL statement that has resource requirements that exceed the specified maximum value.

SQL*Net Handler	PD_PDNH	This record is reserved and unavailable.
SQL*Net Listener	PD_PDNL	Performance data indicating the status (at a specific point in time) of the status and overview of an SQL*Net Listener.
SQL*Net Listeners	PD_PDLS	Performance data indicating the status and overview (at a specific point in time) of each defined listener.
System Event	PD_PDSE	Performance data indicating the status (at a specific point in time) of each queued event in an instance at the system level.
System Event Interval	PI_PISE	Performance data, taken at specific intervals, about each queued event in an instance at the system level.
System Stat Interval	PI_PIST	Metric information about sessions.
System Stat Summary	PD	Performance data indicating the status (at a specific point in time) of key performance indicators.
System Stat Summary Interval	PI	Performance data, taken at specific intervals since the start of an instance, about key performance indicators.
System Statistics	PD_PDST	Performance data indicating the status (at a specific point in time) of all sessions in the system.
Table Access	PD_PDTA	Performance data indicating the status (at a specific point in time) of a table accessed by sessions during data collection.
Tablespace	PD_PDTS	Performance data indicating the status (at a specific point in time) of table spaces in a database.
Tablespace Fragmentation	PD_PDTF	Performance data indicating the status (at a specific point in time) of fragmentation of table spaces.
Tablespace Interval	PI_PITS	Performance data, taken at specific intervals, about table spaces in a database.
Transaction	PD_PDTR	Performance data indicating the status (at a specific point in time) of transactions.
Transaction Interval	PI_PITR	Performance data, taken at specific intervals, about transactions.
Transaction Lock	PD_PDTL	Performance data indicating the status (at a specific point in time) of transaction locks.
Version	PD_PDV	Performance data, taken at a specific point in time, indicating the version number of a core component at the Oracle server.

2.7.1 Activity Summary (PD_PDAS)

Function

The Activity Summary (PD_PDAS) record stores performance data indicating the operating status (at a specific point in time) of the Oracle system.

Table 2.15 Activity Summary (PD_PDAS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	30	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 838 bytes
- Variable part: 0 bytes

Table 2.16 Activity Summary (PD_PDAS) Fields

Activity Summary (PD_PDAS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Active Transactions (ACTIVE_TRANSACTIONS)	Number of active transactions in active sessions	long	No	All	SUM (V\$ROLLSTAT.XACTS)
Avg Wait (AVERAGE_WAIT)	Average wait time for all events in all sessions	ulong	No	All	AVG (V\$SESSION_EVENT.AVERAGE_WAIT)
Avg Wait String (AVERAGE_WAIT_STRING)	Average wait time (character string) for all events in all sessions	string(20)	No	All	AVG (V\$SESSION_EVENT.AVERAGE_WAIT)
Cursor Open Hit % (CURSOR_OPEN_HIT_PERCENTAGE)	Percentage ratio of open cursors that were found during cursor search	double	No	All	V\$SYSTEM_CURSOR_CACHE.HIT_RATIO * 100

Cursor Open Hits (CURSOR_OPEN_HITS)	Total cursor open hits	ulong	No	All	V\$SYSTEM_CURSOR_CACHE.HITS
Cursor Opens (CURSOR_OPENS)	Total cursor opens	ulong	No	All	V\$SYSTEM_CURSOR_CACHE.OPENS
DML Locks % (PERCENT_DML_LOCKS)	Percentage ratio of DML locks to the DML_LOCKS parameter value in the init.ora file	double	No	All	(COUNT(DBA_DML_LOCKS) / init.ora DML_LOCKS) * 100
DML Locks Held (DML_LOCKS_HELD)	Number of current of DML locks	long	No	All	COUNT(DBA_DML_LOCKS)
Enqueue Resources % (PERCENT_ENQUEUE_RESOURCES)	Percentage ratio of locks to the ENQUEUE_RESOURCES parameter value in the init.ora file	double	No	All	(COUNT(V\$LOCK) where V\$LOCK.LMODE is NOT NULL / init.ora ENQUEUE_RESOURCES) * 100
Locks Held (LOCKS_HELD)	Number of current locks	long	No	All	COUNT(V\$LOCK) where V\$LOCK.LMODE is NOT NULL
Open Cursors (OPEN_CURSORS)	Number of current open cursors	long	No	All	COUNT(V\$OPEN_CURSOR)
Open Cursors % (PERCENT_OPEN_CURSORS)	Percentage ratio of open cursors to the OPEN_CURSORS parameter value in the init.ora file	double	No	All	(COUNT(V\$OPEN_CURSOR) / init.ora OPEN_CURSORS) * 100
Processes (PROCESSES)	Number of current Oracle processes	short	No	All	COUNT(V\$PROCESS)
Processes % (PERCENT_PROCESSES)	Percentage ratio of processes to the PROCESSES parameter value in the init.ora file	double	No	All	(COUNT(V\$PROCESS) / init.ora PROCESSES) * 100
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDAS)	string(4)	No	All	Agent Collector
Session Events (SESSION_EVENTS)	Number of events queued by sessions	ulong	No	All	COUNT(V\$SESSION_EVENT)
Session Waits (SESSION_WAITS)	Number of session waits	short	No	All	COUNT(V\$SESSION_WAIT)
Sessions	Number of current sessions	short	No	All	COUNT(V\$SESSION)

(SESSIONS)					
Sessions % (PERCENT_SESSIONS)	Percentage ratio of sessions to the SESSIONS parameter value in the init.ora file	double	No	All	(COUNT(V\$SESSION) / init.ora SESSIONS) * 100
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
System Sessions (SESSIONS_SYSTEM)	Number of current system sessions	short	No	All	COUNT(V\$SESSION) where V\$SESSION.TYPE <> 'USER'
Table Accesses (TABLE_ACCESSES)	Number of current table accesses	long	No	All	COUNT(V\$ACCESS)
Time Waited (TIME_WAITED)	Total length of time events queued by sessions	double	No	All	SUM(V\$SESSION_EVENT.TIME_WAITED)
Time Waited String (TIME_WAITED_STRING)	Total time (character string) events queued by sessions	string(20)	No	All	SUM(V\$SESSION_EVENT.TIME_WAITED)
Total Timeouts (TOTAL_TIMEOUTS)	Total number of timeouts for all events in all sessions	ulong	No	All	SUM(V\$SESSION_EVENT.TOTAL_TIMEOUTS)
Total Waits (TOTAL_WAITS)	Number of waits for all events in all sessions	ulong	No	All	SUM(V\$SESSION_EVENT.TOTAL_WAITS)
Transactions % (PERCENT_TRANSACTIONS)	Percentage ratio of the number of transactions to the TRANSACTIONS parameter value in the init.ora file	double	No	All	(SUM(V\$ROLLSTAT.XACTS) / init.ora TRANSACTION) * 100
User Sessions (SESSIONS_USER)	Number of current user sessions	short	No	All	COUNT(V\$SESSION) where V\$SESSION.TYPE = 'USER'

2.7.2 Backup Async IO (PD_PDBA)

Function

The Backup Async IO (PD_PDBA) record stores performance data indicating the status (at a specific point in time) of a file that was backed up or restored with asynchronous I/O operations and which currently is being or has been executed by the Oracle recovery manager (RMAN). Agent for Oracle creates one record for each file that is backed up or restored with asynchronous I/O operations by the Oracle recovery manager (RMAN). This is a multi-instance record.

Table 2.17 Backup Async IO (PD_PDBA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	35	
Log	No	
LOGIF	(Blank)	

Key Fields

- File Name (FILE_NAME)
- Type (TYPE)
- Use Count (USE_COUNT)

Lifetime

From the start to the end of RMAN

Record Size

- Fixed part: 678 bytes
- Variable part: 359 bytes

Table 2.18 Backup Async IO (PD_PDBA) Fields

Backup Async IO (PD_PDBA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Serial (SERIAL)	Number of session IDs being used for backup or restore processing	double	No	8.1	V\$BACKUP_ASYNC_IO. SERIAL
Buffer Count (BUFFER_COUNT)	Number of buffers used for read or write operations	double	No	8.1	V\$BACKUP_ASYNC_IO. BUFFER_COUNT
Buffer Size (BUFFER_SIZE)	Size of buffer (in kilobytes) used for file read or write	double	No	8.1	V\$BACKUP_ASYNC_IO. BUFFER_SIZE / 1024

	operations				
Close Time (CLOSE_TIME)	Time file was closed (if the value of the Type field is AGGREGATE, this is the time all files were closed in batch mode)	string (20)	No	8.1	V\$BACKUP_ASYNC_IO. CLOSE_TIME
Device Type (DEVICE_TYPE)	Type of device where the file is located	string (17)	No	8.1	V\$BACKUP_ASYNC_IO. DEVICE_TYPE
Effective Rate (EFFECTIVE_KBYTES_PER_SEC)	Asynchronous I/O rate in kilobytes for the device under backup processing	double	No	8.1	V\$BACKUP_ASYNC_IO. EFFECTIVE_BYTES_PER_SECOND / 1024
Elapsed Time (ELAPSED_TIME)	Length of time the file was open in 1/100 seconds	double	Yes	8.1	V\$BACKUP_ASYNC_IO. ELAPSED_TIME
FileName (FILE_NAME)	Name of the backup file	string (122)	No	8.1	V\$BACKUP_ASYNC_IO. FILENAME
IO Count (IO_COUNT)	Number of asynchronous file I/O operations	double	Yes	8.1	V\$BACKUP_ASYNC_IO. IO_COUNT
Long Waits (LONG_WAITS)	Number of times the buffer became available after a block wait was issued	double	Yes	8.1	V\$BACKUP_ASYNC_IO. LONG_WAITS
Max Long Wait Time (LONG_WAIT_TIME_MAX)	Maximum length of block wait time required for asynchronous I/O operations in 1/100 seconds. The value indicated in this field is 1/100 of the actual value.	long	No	8.1	V\$BACKUP_ASYNC_IO. LONG_WAIT_TIME_MAX
Max Open Files (MAX_OPEN_FILES)	If the value of the Type field is AGGREGATE, the number of disk files that are open at any one time; if the value of the Type field is INPUT or OUTPUT, this field is empty	ulong	No	8.1	V\$BACKUP_ASYNC_IO. MAXOPENFILES
Max Short Wait Time (SHORT_WAIT_TIME_MAX)	Maximum unblocked polling time in 1/100 seconds until asynchronous I/O operations were completed	double	No	8.1	V\$BACKUP_ASYNC_IO. SHORT_WAIT_TIME_MAX
Mbytes (MBYTES)	Number of megabytes read or written during the interval	double	Yes	8.1	V\$BACKUP_ASYNC_IO. BYTES / (1024 * 1024)
Open Time (OPEN_TIME)	Time the file was opened (if the value of the Type field is AGGREGATE, the time the first file was opened)	string (20)	No	8.1	V\$BACKUP_ASYNC_IO. OPEN_TIME
Ready (READY)	Number of asynchronous requests for which buffer was made ready	double	No	8.1	V\$BACKUP_ASYNC_IO. READY
Record Time	Collection termination time for the performance data stored in	time_t	No	All	Agent Collector

(RECORD_TIME)	the record				
Record Type (INPUT_RECORD_TYPE)	Record name (always PDBA)	string (4)	No	All	Agent Collector
SID (SID)	Oracle session ID of the session that is executing backup or restore processing	ulong	No	8.1	V\$BACKUP_ASYNC_IO.SID
Set Count (SET_COUNT)	Number of backup sets under read or write operation	double	No	8.1	V\$BACKUP_ASYNC_IO.SET_COUNT
Set Stamp (SET_STAMP)	Set stamp of the backup set under read or write operation	double	No	8.1	V\$BACKUP_ASYNC_IO.SET_STAMP
Short Waits (SHORT_WAITS)	Number of times buffer became available after an asynchronous I/O operation and unblocked polling	double	Yes	8.1	V\$BACKUP_ASYNC_IO.SHORT_WAITS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Backup or restoration status. Valid values are FINISHED, IN_PROGRESS, and NOT_STARTED.	string (12)	No	8.1	V\$BACKUP_ASYNC_IO.STATUS
Total Long Wait Time (LONG_WAIT_TIME_TOTAL)	Total block wait time (in 1/100 seconds) required to complete asynchronous I/O operations. The value indicated in this field is 1/100 of the actual value.	long	Yes	8.1	V\$BACKUP_ASYNC_IO.LONG_WAIT_TIME_TOTAL
Total Mbytes (TOTAL_MBYTES)	Total number of bytes in megabytes read or written (if the value is unknown, this field is empty)	double	Yes	8.1	V\$BACKUP_ASYNC_IO.TOTAL_BYTES / (1024 * 1024)
Total Short Wait Time (SHORT_WAIT_TIME_TOTAL)	Total unblocked polling time (in 1/100 seconds) before asynchronous I/O operation was completed	double	Yes	8.1	V\$BACKUP_ASYNC_IO.SHORT_WAIT_TIME_TOTAL
Type (TYPE)	Type of backup or restore processing. Valid values are AGGREGATE, INPUT, and OUTPUT.	string (10)	No	8.1	V\$BACKUP_ASYNC_IO.TYPE
Use Count (USE_COUNT)	Counter used to identify a row from a different backup set	double	No	8.1	V\$BACKUP_ASYNC_IO.USE_COUNT

2.7.3 Backup Sync IO (PD_PDBS)

Function

The Backup Sync IO (PD_PDBS) record stores performance data indicating the status (at a specific point in time) of a file that was backed up or restored with synchronous I/O operations and which currently is being or has been executed by the Oracle recovery manager (RMAN). Agent for Oracle creates one record for each file that is backed up or restored with synchronous I/O operations by the Oracle recovery manager (RMAN). This is a multi-instance record.

Table 2.19 Backup Sync IO (PD_PDBS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	40	
Log	No	
LOGIF	(Blank)	

Key Fields

- File Name (FILE_NAME)
- Type (TYPE)
- Use Count (USE_COUNT)

Lifetime

From the start to the end of RMAN

Record Size

- Fixed part: 678 bytes
- Variable part: 327bytes

Table 2.20 Backup Sync IO (PD_PDBS) Fields

Backup Sync IO (PD_PDBS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Serial (SERIAL)	Number of session IDs being used for backup or restore processing	double	No	8.1	V\$BACKUP_SYNC_IO.SERIAL
Avg Transfer Rate (DISCRETE_KBYTES_PER_SEC)	Average file transfer rate in kilobytes	double	No	8.1	V\$BACKUP_SYNC_IO.DISCRETE_BYTES_PER_SECOND / 1024

Buffer Count (BUFFER_COUNT)	Number of buffers used for file read or write operations	double	No	8.1	V\$BACKUP_SY NC_IO.BUFFER R_COUNT
Buffer Size (BUFFER_SIZE)	Size of buffer in kilobytes used for file read or write operations	double	No	8.1	V\$BACKUP_SY NC_IO.BUFFER R_SIZE / 1024
Close Time (CLOSE_TIME)	Time the file was closed (if the value of the Type field is AGGREGATE, the time the first file was closed)	string(20)	No	8.1	V\$BACKUP_SY NC_IO.CLOSE _TIME
Device Type (DEVICE_TYPE)	Type of device where the file is located	string(17)	No	8.1	V\$BACKUP_SY NC_IO.DEVIC E_TYPE
Effective Rate (EFFECTIVE_KBYTES PER_SEC)	I/O rate of the device under backup processing in kilobytes	double	No	8.1	V\$BACKUP_SY NC_IO.EFFEC TIVE_BYTES_ PER_SECOND / 1024
Elapsed Time (ELAPSED_TIME)	Length of time the file was open in 1/100 seconds	double	Yes	8.1	V\$BACKUP_SY NC_IO.ELAPS ED_TIME
FileName (FILE_NAME)	Name of backup file	string(122)	No	8.1	V\$BACKUP_SY NC_IO.FILEN AME
IO Count (IO_COUNT)	Number of file I/O operations	double	Yes	8.1	V\$BACKUP_SY NC_IO.IO_CO UNT
Max IO Time (IO_TIME_MAX)	Maximum time required for a single I/O request. The value indicated in this field is 1/100 of the actual value.	double	No	8.1	V\$BACKUP_SY NC_IO.IO_TI ME_MAX
Max Open Files (MAX_OPEN_FILES)	If the value of the Type field is AGGREGATE, the number of disk files that are open at one time; if the value of the Type field is INPUT or OUTPUT, this field is empty	long	No	8.1	V\$BACKUP_SY NC_IO.MAXOP ENFILES
Mbytes (MBYTES)	Number of megabytes read or written during the interval	double	Yes	8.1	V\$BACKUP_SY NC_IO.BYTES / (1024 * 1024)
Open Time (OPEN_TIME)	Time the file was opened (if the value of the Type field is AGGREGATE, the time the first file was opened)	string(20)	No	8.1	V\$BACKUP_SY NC_IO.OPEN_ TIME
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TY	Record name (always PDBS)	string(4)	No	All	Agent Collector

PE)					
SID (SID)	Oracle session ID of the session that is executing backup or restore processing	ulong	No	8.1	V\$BACKUP_SY NC_IO.SID
Set Count (SET_COUNT)	Number of backup sets under read or write operation	double	No	8.1	V\$BACKUP_SY NC_IO.SET_C OUNT
Set Stamp (SET_STAMP)	Set stamp of the backup set under read or write operation	double	No	8.1	V\$BACKUP_SY NC_IO.SET_S TAMP
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Backup or restoration status. Valid values are FINISHED, IN PROGRESS, and NOT STARTED.	string(12)	No	8.1	V\$BACKUP_SY NC_IO.STATU S
Total IO Time (IO_TIME_TOTAL)	Total I/O time on files in 1/100 seconds. The value indicated in this field is 1/100 of the actual value.	double	Yes	8.1	V\$BACKUP_SY NC_IO.IO_TI ME_TOTAL
Total Mbytes (TOTAL_MBYTES)	Total number of megabytes read or written (if this information is unknown, this field is empty)	double	Yes	8.1	V\$BACKUP_SY NC_IO.TOTAL _BYTES / (1024 * 1024)
Type (TYPE)	Type of backup or restore processing. Valid values are AGGREGATE, INPUT, and OUTPUT.	string(10)	No	8.1	V\$BACKUP_SY NC_IO.TYPE
Use Count (USE_COUNT)	Counter used to identify a row from a different backup set	double	No	8.1	V\$BACKUP_SY NC_IO.USE_C OUNT

2.7.4 Block Contention Interval (PI_PIBC)

Function

The Block Contention Interval (PI_PIBC) record stores performance data, taken at specific intervals, about each wait class. To collect this record, you must specify `TRUE` in the `TIMED_STATISTICS` parameter in the `init.ora` Oracle initialization parameter file.

Agent for Oracle creates one record for each wait class. This is a multi-instance record.

Table 2.21 Block Contention Interval (PI_PIBC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	5	
Log	No	
LOGIF	(Blank)	

Key Fields

Class (`CLASS`)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 60 bytes

Table 2.22 Block Contention Interval (PI_PIBC) Fields

Block Contention Interval (PI_PIBC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Class (<code>CLASS</code>)	Block class ^{#1}	<code>string(19)</code>	No	All	<code>V\$WAITSTAT.CLASS</code>
Record Time (<code>RECORD_TIME</code>)	Collection termination time for the performance data stored in the record ^{#1}	<code>time_t</code>	No	All	Agent Collector
Record Type (<code>INPUT_RECORD_TYPE</code>)	Record name (always <code>PIBC</code>) ^{#1}	<code>string(4)</code>	No	All	Agent Collector

Start Time (START_TIME)	Collection start time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector
Wait Count (WAIT_COUNT)	Number of OPERATION waits for the block's CLASS ^{#2}	double	Yes	All	V\$WAITSTAT.COUNT
Wait Time (WAIT_TIME)	Total OPERATION wait time for the block's CLASS ^{#2}	double	Yes	All	V\$WAITSTAT.TIME

2.7.5 Block Contention Statistics (PD_PDBC)

Function

The Block Contention Statistics (PD_PDBC) record stores performance data indicating the status (at a specific point in time) of each wait class. To collect this record, you must specify `TRUE` in the `TIMED_STATISTICS` parameter in the `init.ora` Oracle initialization parameter file.

Agent for Oracle creates one record for each wait class. This is a multi-instance record.

Table 2.23 Block Contention Statistics (PD_PDBC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	5	
Log	No	
LOGIF	(Blank)	

Key Fields

Class (`CLASS`)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 36 bytes

Table 2.24 Block Contention Statistics (PD_PDBC) Fields

Block Contention Statistics (PD_PDBC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Class (<code>CLASS</code>)	Block class	<code>string(19)</code>	No	All	<code>V\$WAITSTAT.CLASS</code>
Record Time (<code>RECORD_TIME</code>)	Collection termination time for the performance data stored in the record	<code>time_t</code>	No	All	Agent Collector
Record Type (<code>INPUT_RECORD_TYPE</code>)	Record name (always <code>PDBC</code>)	<code>string(4)</code>	No	All	Agent Collector
Start Time (<code>START_TIME</code>)	Collection start time for the performance data stored in the record	<code>time_t</code>	No	All	Agent Collector

Wait Count (WAIT_COUNT)	Number of OPERATION waits for the block's CLASS	double	No	All	V\$WAITSTAT.COUNT
Wait Time (WAIT_TIME)	Total OPERATION wait time for the block's CLASS	double	No	All	V\$WAITSTAT.TIME

2.7.6 Buffer Pool (PD_PDBP)

Function

The Buffer Pool (PD_PDBP) record stores performance data indicating the status (at a specific point in time) of the buffer pool available to instances. Agent for Oracle creates one record for each buffer pool. This is a multi-instance record.

Table 2.25 Buffer Pool (PD_PDBP) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	45	
Log	No	
LOGIF	(Blank)	

Key Fields

ID (ID)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 177 bytes

Table 2.26 Buffer Pool (PD_PDBP) Fields

Buffer Pool (PD_PDBP)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Buffer Busy Wait (BUFFER_BUSY_WAIT)	Statistical information about buffer busy waits	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.BUFFER_BUSY_WAIT
Buffers (BUFFERS)	Number of buffers in buffer pool	double	No	8.1	V\$BUFFER_POOL.BUFFERS
Consistent Gets (CONSISTENT_GETS)	Statistical information about consistent gets	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.CONSI STENT_GETS
Db Block Change (DB_BLOCK_CHANGE)	Statistical information about changes to database blocks	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.DB_BLOCK_CHANGE

Db Block Gets (DB_BLOCK_GETS)	Statistical information about collected database blocks	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.DB_BLOCK_GETS
Dirty Buffers Inspected (DIRTY_BUFFERS_INSPECTED)	Information about dirty buffers	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.DIRTY_BUFFERS_INSPECTED
Free Buffer Inspected (FREE_BUFFER_INSPECTED)	Information about free buffers	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.FREE_BUFFER_INSPECTED
Free Buffer Wait (FREE_BUFFER_WAIT)	Statistical information about free buffer waits	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.FREE_BUFFER_WAIT
Got Buffers (BUF_GOT)	Number of buffers collected by sets	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.BUF_GOT
ID (ID)	Buffer pool ID	ulong	No	All	V\$BUFFER_POOL.ID
Max Set Size (SET_MSIZ)	Maximum size of buffer pool set	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.SET_MSIZ
Name (NAME)	Buffer pool name. Valid values are DEFAULT, KEEP, and RECYCLE.	string(20)	No	All	V\$BUFFER_POOL.NAME
Physical Reads (PHYSICAL_READS)	Statistical value of physical read operations	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.PHYSICAL_READS
Physical Writes (PHYSICAL_WRITES)	Statistical value of physical write operations	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.PHYSICAL_WRITES
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDB#)	string(4)	No	All	Agent Collector
Repl Num (CNUM_REPL)	Number of buffers on exchange list	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.CNUM_REPL
Scan Sum (SUM_SCAN)	Number of scanned buffers in sets	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.SUM_SCAN
Set Count (SET_COUNT)	Number of sets in buffer pool	double	No	8.0	V\$BUFFER_POOL.SET_COUNT
Set Num	Number of buffers in sets	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.CNUM_

(CNUM_SET)					SET
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Write Complete Wait (WRITE_COMPLETE_WAIT)	Statistical value of write complete waits	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.WRITE_COMPLETE_WAIT
Write Num (CNUM_WRITE)	Number of buffers on write list	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.CNUM_WRITE
Write Sum (SUM_WRITE)	Number of buffers written in sets	double	Yes	8.1	V\$BUFFER_POOL_STATISTICS.SUM_WRITE

2.7.7 Cache Summary (PD_PDCS)

Function

The Cache Summary (PD_PDCS) record stores performance data indicating the status (at a specific point in time) of each cache in the system global area (SGA).

Table 2.27 Cache Summary (PD_PDCS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	40	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 886 bytes
- Variable part: 0 bytes

Table 2.28 Cache Summary (PD_PDCS) Fields

Cache Summary (PD_PDCS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Cursor Open Hit % (CURSOR_OPEN_HIT_ PERCENTAGE)	Percentage ratio of open cursors that were found during cursor searches	double	No	All	V\$SYSTEM_CURSOR _CACHE.HIT_RATI O * 100
Cursor Open Hits (CURSOR_OPEN_HITS)	Total cursor open hits	double	No	All	V\$SYSTEM_CURSOR _CACHE.HITS
Cursor Opens (CURSOR_OPENS)	Total cursor opens	double	No	All	V\$SYSTEM_CURSOR _CACHE.OPENS
Database Object Cache Keeps (DATABASE_OBJECT_ CACHE_KEEPS)	Number of objects kept	ulong	No	All	COUNT(V\$DB_OBJE CT_CACHE) where KEPT = 'YES'
Database Object Cache	Number of users locking	long	No	All	SUM(V\$DB_OBJECT

Locks (DATABASE_OBJECT_CACHE_LOCKS)	objects in cache				_CACHE.LOCKS)
Database Object Cache Pins (DATABASE_OBJECT_CACHE_PINS)	Number of users who have acquired objects in cache	long	No	All	SUM(V\$DB_OBJECT_CACHE.PINS)
Dict Cache Fixed (DICTIONARY_CACHE_FIXED)	Number of entries fixed in cache	double	No	All	SUM(V\$ROWCACHE.FIXED)
Dict Cache Flushes (DICTIONARY_CACHE_FLUSHES)	Number of disk flushes	double	No	All	SUM(V\$ROWCACHE.FLUSHES)
Dict Cache Get Miss % (DICTIONARY_CACHE_GET_MISSES_PERCENTAGE)	Percentage ratio of data requests resulting in cache miss	double	No	All	(SUM(V\$ROWCACHE.GETMISSES) / SUM(V\$ROWCACHE.GETS)) * 100
Dict Cache Get Misses (DICTIONARY_CACHE_GET_MISSES)	Number of data requests resulting in cache miss	double	No	All	SUM(V\$ROWCACHE.GETMISSES)
Dict Cache Gets (DICTIONARY_CACHE_GETS)	Number of requests for information about data objects	double	No	All	SUM(V\$ROWCACHE.GETS)
Dict Cache Modifications (DICTIONARY_CACHE_MODIFICATIONS)	Number of insert, update, and delete operations	double	No	All	SUM(V\$ROWCACHE.MODIFICATIONS)
Dict Cache Scan Completes (DICTIONARY_CACHE_SCAN_COMPLETES)	Number of times scanning of a list of dependent entries was completed	double	No	All	SUM(V\$ROWCACHE.SCANCOMPLETES)
Dict Cache Scan Misses (DICTIONARY_CACHE_SCAN_MISSES)	Number of times data was not found in cache by scanning	double	No	All	SUM(V\$ROWCACHE.SCANMISSES)
Dict Cache Scan Misses % (DICTIONARY_CACHE_SCAN_MISSES_PERCENTAGE)	Percentage ratio of times data was not found in cache by scanning	double	No	All	(SUM(V\$ROWCACHE.SCANMISSES) / SUM(V\$ROWCACHE.SCANS)) * 100
Dict Cache Scans (DICTIONARY_CACHE_SCANS)	Number of scan requests	double	No	All	SUM(V\$ROWCACHE.SCANS)
Dict Cache Usage (DICTIONARY_CACHE_USAGE)	Number of cache entries with valid data	ulong	No	All	SUM(V\$ROWCACHE.USAGE)
Lib Cache Get Hit % (LIBRARY_CACHE_GET_HIT_PERCENTAGE)	Percentage ratio of times objects were found in	double	No	All	(SUM(V\$LIBRARYCACHE.GETHITS) / SUM(V\$LIBRARYCACHE.GETS)) * 100

T_HIT_PERCENTAGE)	library cache				CHE.GETS) * 100
Lib Cache Get Hits (LIBRARY_CACHE_GET_HITS)	Number of times objects were found in library cache	double	No	All	SUM(V\$LIBRARYCACHE.GETHITS)
Lib Cache Gets (LIBRARY_CACHE_GETS)	Number of locks requested for objects in library cache	double	No	All	SUM(V\$LIBRARYCACHE.GETS)
Lib Cache Invalidations (LIBRARY_CACHE_INVALIDATIONS)	Number of times a nonpermanent library object (such as a shared SQL area) was invalid	double	No	All	SUM(V\$LIBRARYCACHE.INVALIDATIONS)
Lib Cache Miss % (LIBRARY_CACHE_MISS_PERCENTAGE)	Percentage ratio of reloading objects that are in the library cache	double	No	All	(SUM(V\$LIBRARYCACHE.RELOADS) / SUM(V\$LIBRARYCACHE.PINS)) * 100
Lib Cache Pin Hit % (LIBRARY_CACHE_PIN_HIT_PERCENTAGE)	Percentage ratio of LIBRARY_CACHE_PIN_HITS to LIBRARY_CACHE_PINS	double	No	All	(SUM(V\$LIBRARYCACHE.PINHITS) / SUM(V\$LIBRARYCACHE.PINS)) * 100
Lib Cache Pin Hits (LIBRARY_CACHE_PIN_HITS)	Number of times an object acquired or accessed by the system had already been placed in cache and initialized	double	No	All	SUM(V\$LIBRARYCACHE.PINHITS)
Lib Cache Pins (LIBRARY_CACHE_PINS)	Number of times the system acquired an object in cache to access it	double	No	All	SUM(V\$LIBRARYCACHE.PINS)
Lib Cache Reloads (LIBRARY_CACHE_RELOADS)	Number of times the system needed to reinitialize a library object and load it along with the data because it had not been used recently or it was invalid	double	No	All	SUM(V\$LIBRARYCACHE.RELOADS)
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDCS)	string(4)	No	All	Agent Collector
SQL Executing (SQL_EXECUTING)	Total number of users currently executing SQL statements	double	No	All	SUM(V\$SQLAREA.USERS_EXECUTING)
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Total SQL Executions (TOTAL_SQL_EXECUTED)	Total number of SQL executions	double	No	All	execute count

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2.7.8 Cache Summary Interval (PI_PICS)

Function

The Cache Summary Interval (PI_PICS) record stores performance data, taken at specific intervals, about each cache in the system global area (SGA).

Table 2.29 Cache Summary Interval (PI_PICS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	20	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 1,198 bytes
- Variable part: 0 bytes

Table 2.30 Cache Summary Interval (PI_PICS) Fields

Cache Summary Interval (PI_PICS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Cursor Open Hit % (CURSOR_OPEN_HIT_PERCENTAGE)	Percentage ratio of open cursors that were found during cursor searches ^{#2}	double	No	All	V\$SYSTEM_CURSOR_CACHE.HIT_RATIO * 100
Cursor Open Hits (CURSOR_OPEN_HITS)	Total cursor open hits ^{#2}	double	Yes	All	V\$SYSTEM_CURSOR_CACHE.HITS
Cursor Opens (CURSOR_OPENS)	Total cursor opens ^{#2}	double	Yes	All	V\$SYSTEM_CURSOR_CACHE.OPENS
Database Object Cache Keeps (DATABASE_OBJECT_CACHE_KEEPS)	Number of objects kept ^{#2}	ulong	No	All	COUNT(V\$DB_OBJECT_CACHE) where KEPT = 'YES'
Database Object Cache	Number of users locking objects in	long	No	All	SUM(V\$DB_OBJECT_CACHE.L

Locks (DATABASE_OBJECT_CACHE_LOCKS)	cache#2				LOCKS)
Database Object Cache Pins (DATABASE_OBJECT_CACHE_PINS)	Number of users who have acquired objects in cache#2	long	No	All	SUM (V\$DB_OBJECT_CACHE.PINS)
Dict Cache Fixed (DICTIONARY_CACHE_FIXED)	Number of entries fixed in cache#2	ulong	Yes	All	SUM (V\$ROWCACHE.FIXED)
Dict Cache Flushes (DICTIONARY_CACHE_FLUSHES)	Number of disk flushes#2	double	Yes	All	SUM (V\$ROWCACHE.FLUSHES)
Dict Cache Get Misses (DICTIONARY_CACHE_GET_MISSES)	Number of data requests resulting in cache miss#2	double	Yes	All	SUM (V\$ROWCACHE.GETMISSES)
Dict Cache Get Misses % (DICTIONARY_CACHE_GET_MISSES_PERCENTAGE)	Percentage ratio of data requests resulting in cache miss#2	double	No	All	(SUM (V\$ROWCACHE.GETMISSES) / SUM (V\$ROWCACHE.GETS)) * 100
Dict Cache Gets (DICTIONARY_CACHE_GETS)	Number of requests for information about data objects#2	double	Yes	All	SUM (V\$ROWCACHE.GETS)
Dict Cache Modifications (DICTIONARY_CACHE_MODIFICATIONS)	Number of insert, update, and delete operations#2	double	Yes	All	SUM (V\$ROWCACHE.MODIFICATIONS)
Dict Cache Scan Completes (DICTIONARY_CACHE_SCAN_COMPLETES)	Number of times scanning of a list of dependent entries was completed#2	double	Yes	All	SUM (V\$ROWCACHE.SCANCOMPLETES)
Dict Cache Scan Miss % (DICTIONARY_CACHE_SCAN_MISSES_PERCENTAGE)	Percentage ratio of times data was not found in cache by scanning#2	double	No	All	(SUM (V\$ROWCACHE.SCANMISSES) / SUM (V\$ROWCACHE.SCANS)) * 100
Dict Cache Scan Misses (DICTIONARY_CACHE_SCAN_MISSES)	Number of times data was not found in cache by scanning#2	double	Yes	All	SUM (V\$ROWCACHE.SCANMISSES)
Dict Cache Scans (DICTIONARY_CACHE_SCANS)	Number of scan requests#2	double	Yes	All	SUM (V\$ROWCACHE.SCANS)
Dict Cache Usage (DICTIONARY_CACHE_USAGE)	Number of cache entries with valid data#2	double	Yes	All	SUM (V\$ROWCACHE.USAGE)
Lib Cache Get Hit % (LIBRARY_CACHE_GET_HIT_PERCENTAGE)	Percentage ratio of times objects were found in library cache#2	double	No	All	(SUM (V\$LIBRARYCACHE.GETHITS) / SUM (V\$LIBRARYCACHE.GETS)) * 100

Lib Cache Get Hits (LIBRARY_CACHE_GET_HITS)	Number of times objects were found in library cache#2	double	Yes	All	SUM (V\$LIBRARYCACHE . GETHITS)
Lib Cache Gets (LIBRARY_CACHE_GETS)	Number of locks requested for objects in library cache#2	double	Yes	All	SUM (V\$LIBRARYCACHE . GETS)
Lib Cache Invalidations (LIBRARY_CACHE_INVALIDATIONS)	Number of times a nonpermanent library object (such as a shared SQL area) was invalid#2	double	Yes	All	SUM (V\$LIBRARYCACHE . INVALIDATIONS)
Lib Cache Miss % (LIBRARY_CACHE_MISSES_PERCENTAGE)	Percentage ratio of reloading objects that are in the library cache#2	double	No	All	(SUM (V\$LIBRARYCACHE . RELOADS) / SUM (V\$LIBRARYCACHE . PINS)) * 100
Lib Cache Pin Hit % (LIBRARY_CACHE_PIN_HIT_PERCENTAGE)	Percentage ratio of LIBRARY_CACHE_PIN_HITS to LIBRARY_CACHE_PINS#2	double	No	All	(SUM (V\$LIBRARYCACHE . PINHITS) / SUM (V\$LIBRARYCACHE . PINS)) * 100
Lib Cache Pin Hits (LIBRARY_CACHE_PIN_HITS)	Number of times an object acquired or accessed by the system had already been placed in cache and initialized#2	double	Yes	All	SUM (V\$LIBRARYCACHE . PINHITS)
Lib Cache Pins (LIBRARY_CACHE_PINS)	Number of times the system acquired an object in cache to access it#2	double	Yes	All	SUM (V\$LIBRARYCACHE . PINS)
Lib Cache Reloads (LIBRARY_CACHE_RELOADS)	Number of times the system needed to reinitialize a library object and load it along with the data because it had not been used recently or it was invalid#2	double	Yes	All	SUM (V\$LIBRARYCACHE . RELOADS)
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PICS)#1	string (4)	No	All	Agent Collector
SQL Executing (SQL_EXECUTING)	Total number of users currently executing SQL statements#1	double	No	All	SUM (V\$SQLAREA . USERS_EXECUTING)
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Total SQL Executions	Total number of SQL	double	Yes	All	execute count

(TOTAL_SQL_EXECUTIONS)	executions#1				
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2.7.9 Circuit (PD_PDCI)

Function

The Circuit (PD_PDCI) record stores performance data indicating the status (at a specific point in time) of circuits. To collect this record, you must have a multi-thread server (MTS) configuration.

Agent for Oracle creates one record for each circuit of an instance. This is a multi-instance record.

Table 2.31 Circuit (PD_PDCI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	20	
Log	No	
LOGIF	(Blank)	

Key Fields

Circuit (CIRCUIT)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 138 bytes

Table 2.32 Circuit (PD_PDCI) Fields

Circuit (PD_PDCI)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Breaks (BREAKS)	Number of circuit breaks (pauses)	double	No	All	V\$CIRCUIT.BREAKS
Bytes (BYTES)	Number of bytes that passed the circuit	double	No	All	V\$CIRCUIT.BYTES
Circuit (CIRCUIT)	Circuit address	string(16)	No	All	V\$CIRCUIT.CIRCUIT
Circuit Server (SERVER)	Current server's process address	ulong	No	All	V\$CIRCUIT.SERVER

Dispatcher (DISPATCHER)	Current dispatcher's process address	ulong	No	All	V\$CIRCUIT.DISPATCHER
Message0 (MESSAGE0)	Size of message in the first message buffer in bytes	double	No	All	V\$CIRCUIT.MESSAGE0
Message1 (MESSAGE1)	Size of message in the second message buffer in bytes	double	No	All	V\$CIRCUIT.MESSAGE1
Messages (MESSAGES)	Number of messages that passed the circuit	double	No	All	V\$CIRCUIT.MESSAGES
Queue (QUEUE)	Current queue with circuit. This field contains one of the following values: COMMON: Waiting for server process in common queue DISPATCHER: Waiting for dispatcher SERVER: Being processed OUTBOUND: Waiting for outbound connection NONE: Idle circuit	string(16)	No	All	V\$CIRCUIT.QUEUE
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDCI)	string(4)	No	All	Agent Collector
SID (SID)	Session ID bound to the circuit	ulong	No	All	V\$SESSION.SID where V\$CIRCUIT.SADDR = V\$SESSION.SADDR
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Circuit status: BREAK: Pause EOF: Immediately before erasure OUTBOUND: External link to remote database NORMAL: Normal circuit to local database	string(16)	No	All	V\$CIRCUIT.STATUS
User (USERNAME)	Oracle user name	string(30)	No	All	V\$SESSION.USERNAME
Waiter (WAITER)	Address of the server process waiting for a circuit that is currently busy	ulong	No	All	V\$CIRCUIT.WAITER

2.7.10 Control File (PD_PDCF)

Function

The Control File (PD_PDCF) record stores performance data indicating the status (at a specific point in time) of a control file. Agent for Oracle creates one record for each control file. This is a multi-instance record.

Table 2.33 Control File (PD_PDCF) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	15	
Log	No	
LOGIF	(Blank)	

Key Fields

File Name (`NAME`)

Lifetime

From the creation to the deletion of a database

Record Size

- Fixed part: 678 bytes
- Variable part: 266 bytes

Table 2.34 Control File (PD_PDCF) Fields

Control File (PD_PDCF)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
File Name (<code>NAME</code>)	Name of the control file	string(257)	No	All	V\$CONTROLFILE.NAME
Record Time (<code>RECORD_TIME</code>)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (<code>INPUT_RECORD_TYPE</code>)	Record name (always PDCF)	string(4)	No	All	Agent Collector
Start Time (<code>START_TIME</code>)	Collection start time for the performance data stored in the	time_t	No	All	Agent Collector

	record				
Status (STATUS)	Status of control file: INVALID: Name cannot be identified VALID: Name can be identified	string(7)	No	All	V\$CONTROLFILE.ST ATUS

2.7.11 Current Sessions Stat Summary (PD_PDS3)

Function

The Current Sessions Stat Summary (PD_PDS3) record stores performance data indicating the status (at a specific point in time) of all active sessions for an instance.

Table 2.35 Current Sessions Stat Summary (PD_PDS3) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	110	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 986 bytes
- Variable part: 0 bytes

Table 2.36 Current Sessions Stat Summary (PD_PDS3) Fields

Current Sessions Stat Summary (PD_PDS3)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Block Changes/Tran (BLOCK_CHANGES_P ER_TRANSACTION)	Rate at which each transaction executed database manipulation language (DML) statements	double	No	All	db block changes / user commits
Block Visits/Tran (BLOCK_VISITS_P ER_TRANSACTION)	Number of times a work database was loaded per transaction	double	No	All	(db block gets + consistent gets) / user commits
Cache Hit % (CACHE_HIT_P ERCENTAGE)	Percentage ratio of logical read operations to physical read operations	double	No	All	$((\text{db block gets} + \text{consistent gets}) - \text{physical reads}) / (\text{db block gets} + \text{consistent gets}) * 100$

Calls/Tran (CALLS_PER_TRANSACTION)	Rate at which client requests were executed per transaction	double	No	All	user calls / user commits
Changed Block % (CHANGED_BLOCK_PERCENTAGE)	Percentage indicating the balance between queries and database manipulation language (DML) in database application (this value changes according to indexes and application utilization status)	double	No	All	(db block changes / (block gets + consistent gets)) * 100
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage indicating the extent needed for application to conduct consistent read operations	double	No	All	(consistent changes / consistent gets) * 100
Continued Row % (CONTINUED_ROW_PERCENTAGE)	Percentage ratio of fetched rows that were longer than one block or were moved	double	No	All	(table fetch continued row / (table fetch by rowid + table scan rows gotten)) * 100
Deadlocks (LOCK_DEADLOCKS)	Number of process deadlocks caused by DDL enqueueing (locking) in active session	double	No	All	SUM(V\$SESSTAT.VALUE)
Disk Sorts (SORTS_DISK)	Number of disk sort operations	double	No	All	SUM(V\$SESSTAT.VALUE)
Lock Conversions (LOCK_CONVERSIONS)	Number of enqueues (locks) whose mode changed (such as from share to lock)	double	No	All	SUM(V\$SESSTAT.VALUE)
Lock Releases (LOCK_RELEASES)	Number of times enqueueing (locking) was released by active session (this statistical information is the same as the number of lock requests)	double	No	All	SUM(V\$SESSTAT.VALUE)
Lock Requests (LOCK_REQUESTS)	Number of times enqueueing (locking) was requested by active session	double	No	All	SUM(V\$SESSTAT.VALUE)

Lock Timeouts (LOCK_TIMEOUTS)	Number of times enqueueing (locking) request was not permitted by the active session within the specified wait time	double	No	All	SUM(V\$SESSTAT.VALUE)
Lock Waits (LOCK_WAITS)	Number of times lock request was placed in wait status by active session (the number of lock requests that were not placed in wait status equals the number of lock requests minus the number of enqueued waits)	double	No	All	SUM(V\$SESSTAT.VALUE)
Logical Reads (LOGICAL_READS)	Sum of the number of logical read operations in read conformity mode and the number of requests to the current copy of block	double	No	All	db block gets + consistent gets
Non-Index Lookups % (NON_INDEX_LOOKUPS)	Percentage ratio of full table scans where no caching is performed	double	No	All	(table scans (long tables) / (table scans (short tables) + table scans (long tables))) * 100
Physical Reads (PHYSICAL_READS)	Number of times database block was actually read from disk by active session	double	No	All	SUM(V\$SESSTAT.VALUE)
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations on disk by DBWR	double	No	All	SUM(V\$SESSTAT.VALUE)
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDS3)	string (4)	No	All	Agent Collector
Recursive Calls (RECURSIVE_CALLS)	Number of user calls processed	double	No	All	SUM(V\$SESSTAT.VALUE)
Recursive to User Call % (RECURSIVE_TO_USER_CALL_PERCENTAGE)	Correct values cannot be collected in this field. Percentage ratio of recursive calls to user calls	double	No	All	(recursive calls / user calls) * 100

Redo Log Space Requests (REDO_LOG_SPACE_REQUESTS)	Number of times user processes waited for space in REDO log buffer	double	No	All	SUM(V\$SESSTAT.VALUE)
Redo Log Space Wait % (REDO_LOG_SPACE_WAIT_PERCENTAGE)	Percentage indicating the memory allocation	double	No	All	(redo log space requests / redo entries) * 100
Row Source % (ROW_SOURCE_PERCENTAGE)	Percentage ratio of all rows obtained by full table scan	double	No	All	(table scan rows gotten / (table fetch by rowid + table scan rows gotten)) * 100
Session CPU Usage (SESSION_CPU_USAGE)	Total CPU time in 1/100 seconds used to execute statements during data collection	double	No	All	SUM(V\$SESSTAT.VALUE)
Session Cursor Cache Count (SESSION_CURSOR_CACHE_COUNT)	Number of session cursors cached (the maximum number of cursors that can be cached is determined by the SESSION_CACHED_CURSORS parameter in the init.ora file)	double	No	All	SUM(V\$SESSTAT.VALUE)
Session Cursor Cache Hit % (SESSION_CURSOR_CACHE_HIT_PERCENTAGE)	Percentage ratio of session cursors that were reused	double	No	All	(session cursor cache hits / session cursor cache count) * 100
Session Cursor Cache Hits (SESSION_CURSOR_CACHE_HITS)	Number of times cached session cursor was reused	double	No	All	SUM(V\$SESSTAT.VALUE)
Session PGA Memory (SESSION_PGA_MEMORY)	Size of PGA memory used by active session during data collection	double	No	All	SUM(V\$SESSTAT.VALUE)
Session UGA Memory (SESSION_UGA_MEMORY)	Size of UGA memory used by active session	double	No	All	SUM(V\$SESSTAT.VALUE)
Sessions (SESSIONS)	Number of sessions during data collection	ulong	No	All	COUNT(V\$SESSION)

Sort Overflow % (SORT_OVERFLOW_PERCENTAGE)	Percentage ratio of sort operations using temporary segments	double	No	All	$(\text{sorts (disk)} / (\text{sorts (memory)} + \text{sorts (disk)})) * 100$
SQL Net Bytes Rcvd (SQL_NET_BYTES_RECEIVED)	Number of bytes the active sessions received from clients via SQL*Net	double	No	All	SUM(V\$SESSTAT.VALUE)
SQL Net Bytes Sent (SQL_NET_BYTES_SENT)	Number of bytes the active sessions sent to clients via SQL*Net	double	No	All	SUM(V\$SESSTAT.VALUE)
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
User Calls (USER_CALLS)	Number of user calls processed by active sessions	double	No	All	SUM(V\$SESSTAT.VALUE)
User Calls / Parse (USER_CALLS_PER_PARSE)	Percentage indicating how well the application is managing the context area	double	No	All	user calls / parse count (total)
User Commits (USER_COMMITS)	Number of transactions by active session	double	No	All	SUM(V\$SESSTAT.VALUE)
User Rollback % (USER_ROLLBACK_PERCENTAGE)	Percentage ratio of application transactions that failed (rolled back)	double	No	All	$(\text{user rollbacks} / (\text{user commits} + \text{user rollbacks})) * 100$
User Rollbacks (USER_ROLLBACKS)	Number of rollbacks by active session	double	No	All	SUM(V\$SESSTAT.VALUE)
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations to all physical I/O devices	double	No	All	$(\text{physical writes} / (\text{physical reads} + \text{physical writes})) * 100$

2.7.12 Data Dictionary Cache (PD_PDDD)

Function

The Data Dictionary Cache (PD_PDDD) record stores performance data indicating the usage (at a specific point in time) of the data dictionary cache. Agent for Oracle creates one record for each data dictionary cache. This is a multi-instance record.

Table 2.37 Data Dictionary Cache (PD_PDDD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	40	
Log	No	
LOGIF	(Blank)	

Key Fields

- Cache # (CACHE_NUM)
- Subordinate # (SUBORDINATE_NUM)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 137 bytes

Table 2.38 Data Dictionary Cache (PD_PDDD) Fields

Data Dictionary Cache (PD_PDDD)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Cache # (CACHE_NUM)	ID number of row cache	ulong	No	All	V\$ROWCACHE.CACHE#
Count (COUNT)	Total number of entries in cache	ulong	No	All	V\$ROWCACHE.COUNT
Fixed (FIXED)	Number of entries fixed in cache	ulong	No	All	V\$ROWCACHE.FIXED
Flushes (FLUSHES)	Number of times cache was flushed to disk	double	No	All	V\$ROWCACHE.FLUSHES

Get Misses (GET_MISSES)	Number of data requests resulting in cache miss	double	No	All	V\$ROWCACHE.GETMISSES
Get Misses % (GET_MISSES_PERCENTAGE)	Percentage ratio of data requests resulting in cache miss during the interval	double	No	All	(V\$ROWCACHE.GETMISSES / V\$ROWCACHE.GETS) * 100
Gets (GETS)	Total number of requests to data object information	double	No	All	V\$ROWCACHE.GETS
Modifications (MODIFICATIONS)	Number of insert, update, and delete operations	double	No	All	V\$ROWCACHE.MODIFICATIONS
Parameter (PARAMETER)	Name of init.ora parameter that determines the number of entries in data dictionary cache	string (32)	No	All	V\$ROWCACHE.PARAMETER
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDDD)	string (4)	No	All	Agent Collector
Scan Completes (SCAN_COMPLETES)	Number of times a list of subordinate entries was scanned completely	double	No	All	V\$ROWCACHE.SCANCOMPLETES
Scan Misses (SCAN_MISSES)	Number of scans during which data was not found in cache	double	No	All	V\$ROWCACHE.SCANMISSES
Scan Misses % (SCAN_MISSES_PERCENTAGE)	Percentage ratio of scans in which data was not found in cache	double	No	All	(V\$ROWCACHE.SCANMISSES / V\$ROWCACHE.SCANS) * 100
Scans (SCANS)	Number of scan requests	double	No	All	V\$ROWCACHE.SCANS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Subordinate # (SUBORDINATE_NUM)	Subordinate set number	ulong	No	All	V\$ROWCACHE.SUBORDINATE#
Type (TYPE)	Type of master or subordinate row cache	string (11)	No	All	V\$ROWCACHE.TYPE

Usage (USAGE)	Number of cache entries containing valid data	ulong	No	All	V\$ROWCACHE.USAGE
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2.7.13 Data Dictionary Cache Interval (PI_PIDD)

Function

Data Dictionary Cache Interval (PI_PIDD) record stores performance data, taken at specific intervals, about usage of the data dictionary cache. Agent for Oracle creates one record for each data dictionary cache. This is a multi-instance record.

Table 2.39 Data Dictionary Cache Interval (PI_PIDD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	30	
Log	No	
LOGIF	(Blank)	

Key Fields

- Cache # (CACHE_NUM)
- Subordinate # (SUBORDINATE_NUM)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 281 bytes

Table 2.40 Data Dictionary Cache Interval (PI_PIDD) Fields

Data Dictionary Cache Interval (PI_PIDD)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Cache # (CACHE_NUM)	ID number of row cache ^{#1}	ulong	No	All	V\$ROWCACHE.CACHE#
Count (COUNT)	Number of entries in cache ^{#2}	ulong	No	All	V\$ROWCACHE.COUNT
Fixed (FIXED)	Number of entries fixed in cache ^{#2}	ulong	No	All	V\$ROWCACHE.FIXED
Flushes (FLUSHES)	Number of disk flushes ^{#2}	double	Yes	All	V\$ROWCACHE.FLUSHES
Get Misses (GET_MISSES)	Number of data requests resulting in	double	Yes	All	V\$ROWCACHE.GETMISSES

	cache miss during the interval#2				
Get Misses % (GET_MISSES_PERCENTAGE)	Percentage ratio of GETMISSES to GETS during the interval#2	double	No	All	(V\$ROWCACHE.GETMISSES / V\$ROWCACHE.GETS) * 100
Gets (GETS)	Number of requests to data object information during the interval#2	double	Yes	All	V\$ROWCACHE.GETS
Modifications (MODIFICATIONS)	Number of insert, update, and delete operations#2	double	Yes	All	V\$ROWCACHE.MODIFICATIONS
Parameter (PARAMETER)	Name of init.ora parameter that determines the number of entries in data dictionary cache#1	string(32)	No	All	V\$ROWCACHE.PARAMETER
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIDD)#1	string(4)	No	All	Agent Collector
Scan Completes (SCAN_COMPLETES)	Number of times scanning of a list of dependent entries was completed#2	double	Yes	All	V\$ROWCACHE.SCANCOMPLETES
Scan Misses (SCAN_MISSES)	Number of times data was not found in cache by scanning during the interval#2	double	Yes	All	V\$ROWCACHE.SCANMISSES
Scan Misses % (SCAN_MISSES_PERCENTAGE)	Percentage ratio of SCANMISSES to SCANS during the interval#2	double	No	All	(V\$ROWCACHE.SCANMISSES / V\$ROWCACHE.SCANS) * 100
Scans (SCANS)	Number of scan requests during the interval#2	double	Yes	All	V\$ROWCACHE.SCANS
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Subordinate # (SUBORDINATE_NUM)	Subordinate net number#1	ulong	No	All	V\$ROWCACHE.SUBORDINATE#
Type (TYPE)	Type of master or subordinate cache type#1	string(11)	No	All	V\$ROWCACHE.TYPE
Usage (USAGE)	Number of cache entries containing valid data#2	ulong	No	All	V\$ROWCACHE.USAGE

2.7.14 Data File (PD_PDDF)

Function

The Data File (PD_PDDF) record stores performance data indicating the status (at a specific point in time) of data files. Agent for Oracle creates one record for each data file in the database. This is a multi-instance record.

Table 2.41 Data File (PD_PDDF) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	10	
Log	No	
LOGIF	(Blank)	

Key Fields

- File # (FILE_NUM)
- File Name (NAME)

Lifetime

From the creation to the deletion of a data file

Record Size

- Fixed part: 678 bytes
- Variable part: 408 bytes

Table 2.42 Data File (PD_PDDF) Fields

Data File (PD_PDDF)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Blocks (BLOCKS)	Oracle block size	double	No	All	<ul style="list-style-type: none"> ▪ For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: DBA_DATA_FILES.BLOCKS ▪ For locally managed temporary tablespaces: DBA_TEMP_FILES.BLOCKS

Checkpoint Change # (CHECKPOINT_CHANGE_NUM)	System change number (SCN) at the last checkpoint	ulong	No	All	V\$DATAFILE.CHECKPOINT_CHANGE#
Enabled (ENABLED)	Method for accessing file using SQL; this field contains one of the following values: DISABLED READ ONLY READ WRITE UNKNOWN	string (10)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.ENABLED For locally managed temporary tablespaces: V\$TEMPFILE.ENABLED
File # (FILE_NUM)	File identification number	short	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.FILE# For locally managed temporary tablespaces: V\$TEMPFILE.FILE#
File Name (NAME)	File name	string (255)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.NAME For locally managed temporary tablespaces: V\$TEMPFILE.NAME
Free % (PERCENT_FREE)	Percentage ratio of free space	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) / \text{V\\$DATAFILE.BYTES}) * 100$ For locally managed temporary tablespaces: $(\text{V\\$TEMP_SPACE_HEADER} / \text{DBA_TEMP_FILES.BYTES}) * 100$
Free Mbytes (FREE)	Size of free space in megabytes	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed

					<p>permanent tablespaces: $SUM(DBA_FREE_SPACE.BYTES) / (1024 * 1024)$</p> <ul style="list-style-type: none"> For locally managed temporary tablespaces: $(V\\$TEMP_SPACE_HEADER.BYTES_FREE) / (1024 * 1024)$
MBytes (BYTES)	Percentage of disk space used by a file system, in megabytes	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$DATAFILE.BYTES / (1024 * 1024)$ For locally managed temporary tablespaces: $V\\$TEMPFILE.BYTES / (1024 * 1024)$
Physical Blocks Read (PHYSICAL_BLOCKS_READ)	Number of physical block read operations	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$FILESTAT.PHYBLKRD$ For locally managed temporary tablespaces: $V\\$TEMPSTAT.PHYBLKRD$
Physical Blocks Written (PHYSICAL_BLOCKS_WRITTEN)	Number of physical block write operations	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$FILESTAT.PHYBLKWR$ For locally managed temporary tablespaces: $V\\$TEMPSTAT.PHYBLKWR$
Physical Reads (PHYSICAL_READS)	Number of physical read operations that were completed	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$FILESTAT.PHYRDS$ For locally managed temporary tablespaces: $V\\$TEMPSTAT.PHYRDS$

Physical Writes (PHYSICAL_WRITES)	Number of physical write operations that were completed	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$FILESTAT.PHYWRTS For locally managed temporary tablespaces: V\$TEMPSTAT.PHYWRTS
Read Time (READ_TIME)	Read operation time	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$FILESTAT.READTIM For locally managed temporary tablespaces: V\$TEMPSTAT.READTIM
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDDF)	string (4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	File type (system file or user file) and file status (OFFLINE, SYSOFF, ONLINE, SYSTEM, or RECOVER)	string (7)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.STATUS For locally managed temporary tablespaces: V\$TEMPSTAT.STATUS
Tablespace Name (TABLESPACE_NAME)	Tablespace name associated with the file	string (30)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: DBA_DATA_FILES.TABLESPACE_NAME For locally managed temporary tablespaces: DBA_TEMP_FILES.TABLESPACE_NAME
Used Mbytes (USED)	Size of used area in megabytes	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed

					<p>temporary tablespaces, or locally managed permanent tablespaces:</p> $\frac{(V\$DATAFILE.BYTES - SUM(DBA_FREE_SPACE.BYTES))}{(1024 * 1024)}$ <ul style="list-style-type: none"> For locally managed temporary tablespaces: $\frac{(V\$TEMPFILE.BYTES - V\$TEMP_SPACE_HEADER.BYTES_FREE)}{(1024 * 1024)}$
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $\frac{(V\$FILESTAT.PHYWRSTS)}{(V\$FILESTAT.PHYRDS + V\$FILESTAT.PHYWRSTS)} * 100$ <ul style="list-style-type: none"> For locally managed temporary tablespaces: $\frac{(V\$TEMPSTAT.PHYWRSTS)}{(V\$TEMPSTAT.PHYRDS + V\$TEMPSTAT.PHYWRSTS)} * 100$
Write Time (WRITE_TIME)	Write operation time	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\$FILESTAT.WRITETIM$ <ul style="list-style-type: none"> For locally managed temporary tablespaces: $V\$TEMPSTAT.WRITETIM$

2.7.15 Data File Interval (PI_PIDF)

Function

The Data File Interval (PI_PIDF) record stores performance data, taken at specific intervals, about data files. Agent for Oracle creates one record for each data file in the database. This is a multi-instance record.

Table 2.43 Data File Interval (PI_PIDF) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	40	
Log	No	
LOGIF	(Blank)	

Key Fields

- File # (FILE_NUM)
- File Name (NAME)

Lifetime

From the creation to the deletion of a data file

Record Size

- Fixed part: 678 bytes
- Variable part: 632 bytes

Table 2.44 Data File Interval (PI_PIDF) Fields

Data File Interval (PI_PIDF)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Blocks (BLOCKS)	Oracle block size#1	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: DBA_DATA_FILES .BLOCKS For locally managed temporary tablespaces: DBA_TEMP_FILES .BLOCKS
Checkpoint Change # (CHECKPOINT_CHANGE_NUM)	System change number (SCN) at the last checkpoint#1	double	No	All	V\$DATAFILE.CHECKPOINT_CHANGE#
Enabled (ENABLED)	Method for accessing file using SQL; this field contains one of the following values#1: DISABLED READ ONLY READ WRITE UNKNOWN	string (10)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.ENABLED For locally managed temporary tablespaces: V\$TEMPFILE.ENABLED
File # (FILE_NUM)	File identification number#1	ushort	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.FILE#

					<ul style="list-style-type: none"> For locally managed temporary tablespaces: V\$TEMPFILE.FILE#
File Name (NAME)	File name#1	string (255)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.NAME For locally managed temporary tablespaces: V\$TEMPFILE.NAME
Free % (PERCENT_FREE)	Percentage ratio of free space#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) / \text{V\\$DATAFILE.BYTES}) * 100$ For locally managed temporary tablespaces: $(\text{V\\$TEMP_SPACE_HEADER} / \text{DBA_TEMP_FILES.BYTES}) * 100$
Free Change (FREE_CHANGE)	Change to the free space (difference between the value obtained this time and the value obtained last time), in megabytes#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) / (1024 * 1024)$ For locally managed temporary tablespaces:

					(V\$TEMP_SPACE_HEADER.BYTES_FREE) / (1024 * 1024)
Free Mbytes (FREE_BYTES)	Size of free space in megabytes#2	double	No	All	<ul style="list-style-type: none"> ▪ For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: SUM(DBA_FREE_SPACE.BYTES) / (1024 * 1024) ▪ For locally managed temporary tablespaces: (V\$TEMP_SPACE_HEADER.BYTES_FREE) / (1024 * 1024)

I/O Ops/sec (IO_RATE)	Number of I/O operations per second#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $(V\\$FILESTAT.PHY YRDS + V\\$FILESTAT.PHY WRTS) / seconds-in-interval$ For locally managed temporary tablespaces: $(V\\$TEMPSTAT.PHY YRDS + V\\$TEMPSTAT.PHY WRTS) / seconds-in-interval$
Mbytes (BYTES)	Percentage of disk space used by a file system, in megabytes#1	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$DATAFILE.BYTES / (1024 * 1024)$ For locally managed temporary tablespaces: $V\\$TEMPFILE.BYTES / (1024 * 1024)$
Physical Blocks Read (PHYSICAL_BLOCKS_READ)	Number of physical block read operations during the interval#2	double	Yes	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$FILESTAT.PHY BLKRD$ For locally managed temporary tablespaces: $V\\$TEMPSTAT.PHY BLKRD$

Physical Blocks Written (<code>PHYSICAL_BLOCKS_WRITTEN</code>)	Number of physical block write operations during the interval#2	double	Yes	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: <code>V\$FILESTAT.PHYBLKWRT</code> For locally managed temporary tablespaces: <code>V\$TEMPSTAT.PHYBLKWRT</code>
Physical Reads (<code>PHYSICAL_READS</code>)	Number of physical block read operations that were completed during the interval#2	double	Yes	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: <code>V\$FILESTAT.PHYRDS</code> For locally managed temporary tablespaces: <code>V\$TEMPSTAT.PHYRDS</code>
Physical Writes (<code>PHYSICAL_WRITES</code>)	Number of physical block write operations that were completed during the interval#2	double	Yes	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: <code>V\$FILESTAT.PHYWRTS</code> For locally managed temporary tablespaces: <code>V\$TEMPSTAT.PHYWRTS</code>
Read Time (<code>READ_TIME</code>)	If the value of the <code>TIMED_STATISTICS</code> parameter in the <code>init.ora</code> file is <code>TRUE</code> , the read operation time during the interval; if the parameter value is <code>FALSE</code> , this field contains	double	Yes	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed

	0#2				permanent tablespaces: V\$FILESTAT.REA DTIM <ul style="list-style-type: none"> For locally managed temporary tablespaces: V\$TEMPSTAT.REA DTIM
Reads/sec (READ_RATE)	Number of read operations per second#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$FILESTAT.PHY RDS / <i>seconds-in-interval</i> For locally managed temporary tablespaces: V\$TEMPSTAT.PHY RDS / <i>seconds-in-interval</i>
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIDE)#1	string (4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Status (STATUS)	File type (system file or user file) and file status (OFFLINE, SYSOFF, ONLINE, SYSTEM, or RECOVER)#1	string (7)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: V\$DATAFILE.STA TUS For locally managed temporary tablespaces: V\$TEMPSTAT.STA TUS

Tablespace Name (TABLESPACE_NAME)	Tablespace name associated with the file#1	string (30)	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: DBA_DATA_FILES .TABLESPACE_NAME For locally managed temporary tablespaces: DBA_TEMP_FILES.TABLESPACE_NAME
Used Change (USED_CHANGE)	Change to the used space in megabytes#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: (V\$DATAFILE.BYTES - SUM(DBA_FREE_SPACE.BYTES)) / (1024 * 1024) For locally managed temporary tablespaces: (V\$TEMPFILE.BYTES - V\$TEMP_SPACE_HEADER.BYTES_FREE) / (1024 * 1024)
Used Mbytes (USED_BYTES)	Size of used area (difference between the value obtained this time and the value obtained the last time) in megabytes#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: (V\$DATAFILE.BYTES - SUM(DBA_FREE_SPACE.BYTES)) / (1024 * 1024) For locally managed temporary

					<p>tablespaces:</p> $(V\$TEMPFILE.BYTES - V\$TEMP_SPACE_HEADER.BYTES_FREE) / (1024 * 1024)$
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operation#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $(V\\$FILESTAT.PHYWRTS / (V\\$FILESTAT.PHYRDS + V\\$FILESTAT.PHYWRTS)) * 100$ For locally managed temporary tablespaces: $((V\\$TEMPSTAT.PHYWRTS / (V\\$TEMPSTAT.PHYRDS + V\\$TEMPSTAT.PHYWRTS)) * 100$
Write Time (WRITE_TIME)	If the value of the TIMED_STATISTICS parameter in the init.ora file is TRUE, the write operation time during the interval; if the parameter value is FALSE, this field contains 0#2	double	Yes	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces: $V\\$FILESTAT.WRITETIM$ For locally managed temporary tablespaces: $V\\$TEMPSTAT.WRITETIM$
Writes/sec (WRITES_RATE)	Number of write operations per second#2	double	No	All	<ul style="list-style-type: none"> For dictionary managed permanent tablespaces, dictionary managed temporary tablespaces, or locally managed permanent tablespaces:

					V\$FILESTAT.PHY WRTS / <i>seconds- in-interval</i> <ul style="list-style-type: none"> ▪ For locally managed temporary tablespaces: V\$TEMPSTAT.PHY WRTS / <i>seconds- in-interval</i>
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2.7.16 Database (PD_PDDB)

Function

The Database (PD_PDDB) record stores performance data, taken at a specific point in time, indicating the following:

- General information about a database
- Statistical information on table spaces
- Statistical information on data files

Table 2.45 Database (PD_PDDB) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	3600	Yes
Collection Offset	20	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of a database

Record Size

- Fixed part: 874 bytes
- Variable part: 0 bytes

Table 2.46 Database (PD_PDDB) Fields

Database (PD_PDDB)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Archive Change # (ARCHIVE_CHANGE_NUM)	Last archived system change number (SCN)	double	No	All	V\$DATABASE.ARCHIVE_ CHANGE#
Blocks (BLOCKS)	Size of tablespace in Oracle blocks	double	No	All	<ul style="list-style-type: none"> ■ For Oracle8® or earlier, and Oracle8i® or later that do not have any locally managed tablespaces: SUM(DBA_DATA_FILES. BLOCKS)

					<ul style="list-style-type: none"> For Oracle8i or later, which has locally managed temporary tablespaces: $SUM(DBA_DATA_FILES.BLOCKS) + SUM(DBA_TEMP_FILES.BLOCKS)$
Checkpoint Change # (CHECKPOINT_CHANGE_NUMBER)	System change number (SCN) at the last checkpoint	ulong	No	All	V\$DATABASE.CHECKPOINT_CHANGE#
Created (CREATED)	Creation date	string (20)	No	All	V\$DATABASE.CREATED
DB Files % (PERCENT_DB_FILES)	Percentage ratio of the data files to the DB_FILES parameter value in the init.ora file	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $(COUNT(V\$DATAFILE) / init.ora DB_FILES) * 100$ For Oracle8i or later, which has locally managed temporary tablespaces: $((COUNT(V\$DATAFILE) + COUNT(DBA_TEMP_FILES)) / init.ora DB_FILES) * 100$
DB Name (NAME)	Database name	string (9)	No	All	V\$DATABASE.NAME
Datafiles (DATAFILES)	Number of data files	short	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $COUNT(V\$DATAFILE)$ For Oracle8i or later, which has locally managed temporary tablespaces: $COUNT(V\$DATAFILE) + COUNT(DBA_TEMP_FILES)$
Extents (EXTENTS)	Correct values cannot be collected in this field. Number of extents	long	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $SUM(DBA_SEGMENTS.EXTENTS)$ For Oracle8i or later, which has locally managed temporary tablespaces: $SUM(DBA_SEGMENTS.EXTENTS) + SUM(V\$SORT_SEGMENT.TOTAL_EXTENTS)$

Free % (PERCENT_FREE)	Percentage ratio of free space	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE}.\text{BYTES}) / \text{DBA_DATA_FILES}.\text{BYTES}) * 100$ For Oracle8i or later, which has locally managed temporary tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE}.\text{BYTES}) + \text{SUM}(\text{V\\$TEMP_SPACE_HEADER}.\text{BYTES_FREE}) / (\text{DBA_DATA_FILES}.\text{BYTES} + \text{DBA_TEMP_FILES}.\text{BYTES})) * 100$
Free Extents (FREE_EXTENTS)	Number of free extents	long	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $\text{COUNT}(\text{DBA_FREE_SPACE})$ For Oracle8i or later, which has locally managed temporary tablespaces: $\text{COUNT}(\text{DBA_FREE_SPACE}) + \text{COUNT}(\text{V\\$TEMP_SPACE_HEADER})$
Free Mbytes (FREE_BYTES)	Size of free space in megabytes	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $\text{SUM}(\text{DBA_FREE_SPACE}.\text{BYTES}) / (1024 * 1024)$ For Oracle8i or later, which has locally managed temporary tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE}.\text{BYTES}) + \text{SUM}(\text{V\\$TEMP_SPACE_HEADER}.\text{BYTES_FREE})) / (1024 * 1024)$
High Max Extents (HIGH_MAX_EXTENTS)	Correct values cannot be collected in this field. Number of segments whose PCT_MAX_EXTENTS exceeds 90%	short	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $\text{COUNT}(\text{DBA_SEGMENTS})$ where $\text{DBA_SEGMENTS}.\text{EXTENTS} > 0.9 * \text{DBA_SEGMENTS}.\text{MAX_EXTENTS}$ For Oracle8i or later, which has locally managed

					temporary tablespaces: COUNT (DBA_SEGMENTS) where DBA_SEGMENTS.EXTENT S > 0.9 * DBA_SEGMENTS.MAX_EX TENTS+COUNT (V\$SORT_ SEGMENT) where V\$SORT_SEGMENTS.TOT AL_EXTENTS > 0.9 * V\$SORT_SEGMENT.MAX_ SIZE
Links (LINKS)	This field is not supported. Number of database links	short	No	Not supported	COUNT (V\$DBLINK)
Links In Tran (LINKS_IN_TRAN)	This field is not supported. Number of current database links in transaction	short	No	Not supported	SUM (V\$DBLINK.IN_TRANSA CTION)
Links Logged On (LINKS_LOGGED_ON)	This field is not supported. Number of database links currently logged on	short	No	Not supported	SUM (V\$DBLINK.LOGGED_ON)
Links Open Cursors (LINKS_OPEN_CURSORS)	This field is not supported. Number of database links with open cursor	short	No	Not supported	SUM (V\$DBLINK.OPEN_CURS ORS)
Log Files % (PERCENT_LOG_FILES)	Percentage ratio of REDO log files to the LOG_FILES parameter value in the init.ora file	double	No	8.0	(COUNT (V\$LOGFILE) / init.ora LOG_FILES) * 100
Log Mode (LOG_MODE)	Archive log mode. Valid values are NOARCHIVELOG and ARCHIVELOG.	string (12)	No	All	V\$DATABASE.LOG_MODE
Mbytes (BYTES)	Size of the database file in megabytes	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: SUM (DBA_DATA_FILES. BYTES) / (1024 * 1024) ▪ For Oracle8i or later, which has locally managed temporary tablespaces: (SUM (DBA_DATA_FILES .BYTES) + SUM (DBA_TEMP_FILES. BYTES)) / (1024 * 1024)

Next Alloc Fails (NEXT_ALLOC_FAILS)	Number of segments that exceed the maximum fragments permitted for NEXT_EXTENT. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	short	No	All	COUNT (DBA_SEGMENTS) where NEXT_EXTENT > MAX (FETS\$.LENGTH) * DB_BLOCK_SIZE
Overextended (OVEREXTENDED)	Correct values cannot be collected in this field. Number of segments with more than five extents	short	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: COUNT (DBA_SEGMENTS) where EXTENTS > 5 For Oracle8i or later, which has locally managed temporary tablespaces: COUNT (DBA_SEGMENTS) where EXTENTS > 5 + COUNT (V\$SORT_SEGMENT) where TOTAL_EXTENTS > 5
Physical Blocks Read (PHYSICAL_BLOCKS_READ)	Number of physical block read operations	double	No	All	SUM (V\$FILESTAT.PHYBLKRD)
Physical Blocks Written (PHYSICAL_BLOCKS_WRITTEN)	Number of physical block write operations	double	No	All	SUM (V\$FILESTAT.PHYBLKWR)
Physical Reads (PHYSICAL_READS)	Number of physical read operations that were completed	double	No	All	SUM (V\$FILESTAT.PHYRDS)
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations that were completed	double	No	All	SUM (V\$FILESTAT.PHYWRTS)
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDDB)	string (4)	No	All	Agent Collector
Redo Files (REDO_FILES)	Number of REDO log files	short	No	All	COUNT (V\$LOGFILE)
Rollback Segments (ROLLBACK_SEGMENTS)	Number of rollback segments	short	No	All	COUNT (V\$ROLLNAME)
Rollback Segments Hit % (ROLLBACK_SEGMENTS_HIT_PERCENTAGE)	Rate at which a rollback segment header was obtained without waiting	double	No	All	((SUM (V\$ROLLSTAT.GETS) - SUM (V\$ROLLSTAT.WAITS)) /

					$SUM(V\$ROLLSTAT.GETS) * 100$
Rollback Segments Trans (ROLLBACK_SEGMENTS_TRANS)	Number of currently active transactions	short	No	All	$SUM(V\$ROLLSTAT.XACTS)$
Segments (SEGMENTS)	Correct values cannot be collected in this field. Number of segments	long	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $COUNT(DBA_SEGMENTS)$ ▪ For Oracle8i or later, which has locally managed temporary tablespaces: $COUNT(DBA_SEGMENTS) + COUNT(V\\$SORT_SEGMENT)$
Sort Segments (SORT_SEGMENTS)	Correct values cannot be collected in this field. Number of sort segments	short	No	All	$COUNT(V\$SORT_SEGMENT)$
Sorting Users (SORTING_USERS)	Number of active users for the current sort segment	long	No	All	$SUM(V\$SORT_SEGMENT.CURRENT_USERS)$
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Tablespaces (TABLESPACES)	Number of tablespaces	short	No	All	$COUNT(DBA_TABLESPACES)$
Used Mbytes (USED_BYTES)	Size of used area in megabytes. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	double	No	All	$SUM(sm\$ts_used.bytes) / (1024 * 1024)$
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations	double	No	All	$(SUM(V\$FILESTAT.PHYWRTS) / (SUM(V\$FILESTAT.PHYRDS) + SUM(V\$FILESTAT.PHYWRTS))) * 100$

2.7.17 Database Interval (PI_PIDB)

Function

The Database Interval (PI_PIDB) record stores performance data, taken at specific intervals, about a database.

Table 2.47 Database Interval (PI_PIDB) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	3600	Yes
Collection Offset	10	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of a database

Record Size

- Fixed part: 1,398 bytes
- Variable part: 0 bytes

Table 2.48 Database Interval (PI_PIDB) Fields

Database Interval (PI_PIDB)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Archive Change # (ARCHIVE_CHANGE_NUM)	Last archived system change number (SCN) ^{#1}	double	No	All	V\$DATABASE.ARCHIVE_CHANGE#
Blocks (BLOCKS)	Size of database in Oracle blocks ^{#2}	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: SUM(DBA_DATA_FILES.BLOCKS) ▪ For Oracle8i or later, which has locally managed temporary tablespaces: SUM(DBA_DATA_FILES.BLOCKS) +

					SUM (DBA_TEMP_FILE S.BLOCKS)
Checkpoint Change # (CHECKPOINT_CHANGE_NUM)	System change number (SCN) at the last checkpoint# ¹	double	No	All	V\$DATABASE.CHECKPOIN T_CHANGE#
Created (CREATED)	Creation date# ¹	string(20)	No	All	V\$DATABASE.CREATED
Datafiles (DATAFILES)	Number of data files# ²	short	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: COUNT (V\$DATAFILE) ▪ For Oracle8i or later, which has locally managed temporary tablespaces: COUNT (V\$DATAFILE) + COUNT (DBA_TEMP_FI LES)
DB Files % (PERCENT_DB_FILES)	Percentage ratio of the data files to the DB_FILES parameter value in the init.ora file# ²	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: (COUNT (V\$DATAFILE) / init.ora DB_FILES) * 100 ▪ For Oracle8i or later, which has locally managed temporary tablespaces: ((COUNT (V\$DATAFIL E) + COUNT (DBA_TEMP_FI LES)) / init.ora DB_FILES) * 100
DB Name (NAME)	Database name# ¹	string(9)	No	All	V\$DATABASE.NAME
Extents (EXTENTS)	Correct values cannot be collected in this field. Number of extents# ²	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: SUM (DBA_SEGMENTS. EXTENTS) ▪ For Oracle8i or later, which has locally managed temporary tablespaces: SUM (DBA_SEGMENTS. EXTENTS) + SUM (V\$SORT_SEGMEN

					T.TOTAL_EXTENTS)
Free % (PERCENT_FREE)	Percentage ratio of free space ^{#2}	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) / \text{DBA_DATA_FILES.BYTES}) * 100$ For Oracle8i or later, which has locally managed temporary tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) + \text{SUM}(\text{V\\$TEMP_SPACE_HEADER.BYTES_FREE})) / (\text{DBA_DATA_FILES.BYTES} + \text{DBA_TEMP_FILES.BYTES}) * 100$
Free Change (FREE_CHANGE)	Change to the free space in bytes ^{#2}	double	No	All	SUM(DBA_FREE_SPACE.BYTES)
Free Extents (FREE_EXTENTS)	Number of free extents ^{#2}	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: COUNT(DBA_FREE_SPACE) For Oracle8i or later, which has locally managed temporary tablespaces: COUNT(DBA_FREE_SPACE) + COUNT(V\$TEMP_SPACE_HEADER)
Free Mbytes (FREE_BYTES)	Size of free space in megabytes ^{#2}	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) / (1024 * 1024)$ For Oracle8i or later, which has locally managed temporary tablespaces: $(\text{SUM}(\text{DBA_FREE_SPACE.BYTES}) + \text{SUM}(\text{V\\$TEMP_SPACE_HEADER.BYTES_FREE})) / (1024 * 1024)$

)) / (1024 * 1024)
High Max Extent (HIGH_MAX_EXTENTS)	Correct values cannot be collected in this field. Number of segments whose PCT_MAX_EXTENTS exceeds 90%#2	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: COUNT (DBA_SEGMENT S) where DBA_SEGMENTS.EXTENTS > 0.9 * DBA_SEGMENTS.MAX_EXTENTS For Oracle8i or later, which has locally managed temporary tablespaces: COUNT (DBA_SEGMENT S) where DBA_SEGMENTS.EXTENTS > 0.9 * DBA_SEGMENTS.MAX_EXTENTS+COUNT (V\$SORT_SEGMENT) where V\$SORT_SEGMENTS.TOTAL_EXTENTS > 0.9 * V\$SORT_SEGMENT.MAX_SIZE
I/O Ops/sec (IO_RATE)	Number of I/O operations per second#2	double	No	All	(SUM (V\$FILESTAT.PHYRDS) + SUM (V\$FILESTAT.PHYWRTS)) / seconds in interval
Links (LINKS)	This field is not supported. Number of database links#2	short	No	Not supported	COUNT (V\$DBLINK)
Links In Tran (LINKS_IN_TRAN)	This field is not supported. Number of current database links in transaction#2	short	No	Not supported	SUM (V\$DBLINK.IN_TRANSACTION)
Links Logged On (LINKS_LOGGED_ON)	This field is not supported. Number of database links currently logged on#2	short	No	Not supported	SUM (V\$DBLINK.LOGGED_ON)
Links Open Cursors (LINKS_OPEN_CURSORS)	This field is not supported. Number of database links with open	short	No	Not supported	SUM (V\$DBLINK.OPEN_CURSORS)

	cursor#2				
Log Files % (PERCENT_LOG_FILES)	Percentage ratio of REDO log files to the LOG_FILES parameter value in the init.ora file#2	double	No	8.0	(COUNT(V\$LOGFILE) / init.ora LOG_FILES) * 100
Log Mode (LOG_MODE)	Archive log mode. Valid values are NOARCHIVELOG and ARCHIVELOG.#1	string(12)	No	All	V\$DATABASE.LOG_MODE
Mbytes (BYTES)	Size of database in megabytes#2	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: SUM(DBA_DATA_FILES.BYTES) / (1024 * 1024) For Oracle8i or later, which has locally managed temporary tablespaces: (SUM(DBA_DATA_FILES.BYTES) + SUM(DBA_TEMP_FILES.BYTES)) / (1024 * 1024)
Next Alloc Fails (NEXT_ALLOC_FAILS)	Number of segments that exceed the maximum fragments permitted for NEXT_EXTENT. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.#2	ulong	No	All	COUNT(DBA_SEGMENTS) where NEXT_EXTENT > MAX(FET\$.LENGTH) * DB_BLOCK_SIZE
Overextended (OVEREXTENDED)	Correct values cannot be collected in this field. Number of segments with more than five extents#2	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: COUNT(DBA_SEGMENTS) where EXTENTS > 5

					<ul style="list-style-type: none"> For Oracle8i or later, which has locally managed temporary tablespaces: COUNT (DBA_SEGMENT S) where EXTENTS > 5 + COUNT (V\$SORT_SEGMENT) where TOTAL_EXTENTS > 5
Physical Blocks Read (PHYSICAL_BLOCKS_READ)	Number of physical block read operations#2	double	Yes	All	SUM (V\$FILESTAT.PHYBLKRD)
Physical Blocks Written (PHYSICAL_BLOCKS_WRITTEN)	Number of physical block write operations#2	double	Yes	All	SUM (V\$FILESTAT.PHYBLKWRT)
Physical Reads (PHYSICAL_READS)	Number of physical read operations that were completed#2	double	Yes	All	SUM (V\$FILESTAT.PHYRDS)
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations that were completed#2	double	Yes	All	SUM (V\$FILESTAT.PHYWRTS)
Reads/sec (READ_RATE)	Number of read operations per second#2	double	No	All	SUM (V\$FILESTAT.PHYRDS) / seconds in interval
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIDB)#1	string(4)	No	All	Agent Collector
Redo Files (REDO_FILES)	Number of REDO log files#2	ushort	No	All	COUNT (V\$LOGFILE)
Rollback Segments (ROLLBACK_SEGMENTS)	Number of rollback segments#2	ulong	No	All	COUNT (V\$ROLLNAME)
Rollback Segments Hit % (ROLLBACK_SEGMENTS_HIT_PERCENTAGE)	Rate at which a rollback segment header was obtained without waiting#2	double	No	All	((SUM (V\$ROLLSTAT.GETS) - SUM (V\$ROLLSTAT.WAITS)) / SUM (V\$ROLLSTAT.GETS)) * 100
Rollback Segments Trans (ROLLBACK_SEGMENTS_TRANS)	Number of currently active transactions#2	long	No	All	SUM (V\$ROLLSTAT.XACTS)
Segments	Correct values cannot be	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that

(SEGMENTS)	collected in this field. Number of segments#2				do not have any locally managed temporary tablespaces: COUNT (DBA_SEGMENT S) ▪ For Oracle8i or later, which has locally managed temporary tablespaces: COUNT (DBA_SEGMENT S) + COUNT (V\$SORT_SEGMENT)
Sort Segments (SORT_SEGMENTS)	Correct values cannot be collected in this field. Number of sort segments#2	ulong	No	All	COUNT (V\$SORT_SEGMENT)
Sorting Users (SORTING_USERS)	Number of active users for the current sort segment#2	long	No	All	SUM (V\$SORT_SEGMENT . CURRENT_USERS)
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Tablespaces (TABLESPACES)	Number of tablespaces#2	double	No	All	COUNT (DBA_TABLESPACE S)
Used Change (USED_CHANGE)	Change to the used space in bytes#2	double	No	All	SUM (sm\$ts_uses.bytes)
Used Mbytes (USED_BYTES)	Size of used area in megabytes. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.#2	double	No	All	SUM (sm\$ts_used.bytes) / (1024 * 1024)
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations#2	double	No	All	(SUM (V\$FILESTAT . PHYWR TS) / (SUM (V\$FILESTAT . PHYR DS) + SUM (V\$FILESTAT . PHYWR TS))) * 100
Writes/sec (WRITES_RATE)	Number of write operations per second#2	double	No	All	SUM (V\$FILESTAT . PHYWR TS) / seconds in interval

2.7.18 Database Object Cache (PD_PDDO)

Function

The Database Object Cache (PD_PDDO) record stores performance data indicating the status (at a specific point in time) of database objects in the library cache. Agent for Oracle creates one record for each database object. This is a multi-instance record.

Table 2.49 Database Object Cache (PD_PDDO) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	30	
Log	No	
LOGIF	(Blank)	

Key Fields

Object Name (NAME)

Lifetime

From the loading to erasing of data in the library cache of the database object

Record Size

- Fixed part: 678 bytes
- Variable part: 298 bytes

Table 2.50 Database Object Cache (PD_PDDO) Fields

Database Object Cache (PD_PDDO)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
DB Link (DB_LINK)	Name of the database link, if it exists	string(64)	No	All	V\$DB_OBJECT_CACHE.DB_LINK
Executions (EXECUTIONS)	Number of times object was executed	double	No	All	V\$DB_OBJECT_CACHE.EXECUTIONS
Kept (KEPT)	If the object was retained by the DBMS_SHARED_POOL.KEEP PL/SQL procedure, the value of this field is YES. Otherwise, the value is NO.	string(3)	No	All	V\$DB_OBJECT_CACHE.KEPT

Loads (LOADS)	Number of times the object was loaded (this value increases even when the object is invalid)	double	No	All	V\$DB_OBJECT_CACHE.LOADS
Locks (LOCKS)	Number of users currently locking this object	long	No	All	V\$DB_OBJECT_CACHE.LOCKS
Namespace (NAMESPACE)	Object's name space in library cache. Valid values are TABLE/PROCEDURE, BODY, TRIGGER, INDEX, CLUSTER, and OBJECT.	string(15)	No	All	V\$DB_OBJECT_CACHE.NAMESPACE
Object Name (NAME)	Object name	string(100)	No	All	V\$DB_OBJECT_CACHE.NAME
Owner (OWNER)	Object's owner	string(64)	No	All	V\$DB_OBJECT_CACHE.OWNER
Pins (PINS)	Number of users who currently have the object	long	No	All	V\$DB_OBJECT_CACHE.PINS
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDDO)	string(4)	No	All	Agent Collector
Sharable Mem (SHARABLE_MEM)	Size of shared memory in bytes used by the object in shared pool	double	No	All	V\$DB_OBJECT_CACHE.SHARABLE_MEM
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Type (TYPE)	Object type. Valid values are INDEX, TABLE, CLUSTER, VIEW, SET, SYNONYM, SEQUENCE, PROCEDURE, FUNCTION, PACKAGE, PACKAGE BODY, TRIGGER, CLASS, OBJECT, USER, and DBLINK.	string(14)	No	All	V\$DB_OBJECT_CACHE.TYPE

2.7.19 Dispatcher (PD_PDDS)

Function

The Dispatcher (PD_PDDS) record stores performance data indicating the status (at a specific point in time) of dispatcher processes. To collect this record, you must have a multi-thread server (MTS) configuration.

Agent for Oracle creates one record for each dispatcher in an instance. This is a multi-instance record.

Table 2.51 Dispatcher (PD_PDDS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	45	
Log	No	
LOGIF	(Blank)	

Key Fields

Process Name (NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 228 bytes

Table 2.52 Dispatcher (PD_PDDS) Fields

Dispatcher (PD_PDDS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Accept (ACCEPT)	If the dispatcher accepts a new connection, the value of this field is YES, otherwise the value is NO.	string (3)	No	All	V\$DISPATCHER.ACCEPT
Breaks (BREAKS)	Number of breaks (pauses) in this connection	double	No	All	V\$DISPATCHER.BREAKS
Busy (BUSY)	Dispatcher's total busy time in 1/100 seconds	double	No	All	V\$DISPATCHER.BUSY
Busy % (PERCENT_BUSY)	Percentage ratio of the time the dispatcher was busy	double	No	All	(V\$DISPATCHER.BUSY / (V\$DISPATCHER.B

					$USY + V\$DISPATCHER.IDLE) * 100$
Bytes (BYTES)	Size of message processed by the dispatcher in bytes	double	No	All	$V\$DISPATCHER.BYTES$
Created (CREATED)	Number of circuits created by the dispatcher	ulong	No	All	$V\$DISPATCHER.CREATED$
Idle (IDLE)	Dispatcher's idle time in 1/100 seconds	double	No	All	$V\$DISPATCHER.IDLE$
Idle % (PERCENT_IDLE)	Percentage ratio of the time the dispatcher was in idle status	double	No	All	$(V\$DISPATCHER.IDLE / (V\$DISPATCHER.BUSY + V\$DISPATCHER.IDLE)) * 100$
Listener (LISTENER)	Most recent Oracle error number the dispatcher received from listener	long	No	All	$V\$DISPATCHER.LISTENER$
Messages (MESSAGES)	Number of messages processed by the dispatcher	double	No	All	$V\$DISPATCHER.MESSAGES$
Network (NETWORK)	Network protocols supported by the dispatcher (such as TCP or DECNET)	string (128)	No	All	$V\$DISPATCHER.NETWORK$
Oracle PID (PID)	Dispatcher process's Oracle process ID	long	No	All	$V\$PROCESS.PID$ where $V\$DISPATCHER.PADDR = V\$PROCESS.ADDR$
Owned (OWNED)	Number of circuits owned by the dispatcher	ulong	No	All	$V\$DISPATCHER.OWNED$
Process Name (NAME)	Name of dispatcher process	string (5)	No	All	$V\$DISPATCHER.NAME$
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDDS)	string (4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

Status (STATUS)	Dispatcher status: WAIT: Idle SEND: Sending a message connection RECEIVE: Receiving a message CONNECT: Establishing connection DISCONNECT: Processing a disconnection request BREAK: Engaged in break processing OUTBOUND: Establishing outbound connection (up to 8.0) TERMINATE: Under termination processing (8.1 or later) ACCEPT: Accepting connection (no available information, 8.1 or later) REFUSE: Refusing connection (no available information, 8.1 or later)	string (16)	No	All	V\$DISPATCHER.STATUS
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2.7.20 Dispatcher Interval (PI_PIDS)

Function

The Dispatcher Interval (PI_PIDS) record stores performance data, taken at specific intervals, about dispatcher processes. To collect this record, you must have a multi-thread server (MTS) configuration.

Agent for Oracle creates one record for each dispatcher in an instance. This is a multi-instance record.

Table 2.53 Dispatcher Interval (PI_PIDS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	35	
Log	No	
LOGIF	(Blank)	

Key Fields

Process Name (NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 334 bytes

Table 2.54 Dispatcher Interval (PI_PIDS) Fields

Dispatcher Interval (PI_PIDS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Accept (ACCEPT)	If the dispatcher accepts a new connection, the value of this field is YES, otherwise the value is NO. ^{#1}	string(3)	No	All	V\$DISPATCHER.ACCEPT
Breaks (BREAKS)	Number of breaks (pauses) in this connection ^{#2}	double	Yes	All	V\$DISPATCHER.BREAKS
Busy (BUSY)	Dispatcher's total busy time in 1/100 seconds during the interval ^{#2}	double	Yes	All	V\$DISPATCHER.BUSY

Busy % (PERCENT_BUSY)	Percentage ratio of the time the dispatcher was busy#2	double	No	All	$(V\$DISPATCHER.BUSY / (V\$DISPATCHER.BUSY + V\$DISPATCHER.IDLE)) * 100$
Bytes (BYTES)	Size of message processed by the dispatcher in bytes during the interval#2	double	Yes	All	V\$DISPATCHER.BYTES
Created (CREATED)	Number of circuits created by the dispatcher#2	ulong	Yes	All	V\$DISPATCHER.CREATED
Idle (IDLE)	Dispatcher's idle time in 1/100 seconds during the interval#2	double	Yes	All	V\$DISPATCHER.IDLE
Idle % (PERCENT_IDLE)	Percentage ratio of the time the dispatcher was in idle status#2	double	No	All	$(V\$DISPATCHER.IDLE / (V\$DISPATCHER.BUSY + V\$DISPATCHER.IDLE)) * 100$
Listener (LISTENER)	Most recent Oracle error number the dispatcher received from listener#1	short	No	All	V\$DISPATCHER.LISTENER
Messages (MESSAGES)	Number of messages processed by the dispatcher during the interval#2	double	Yes	All	V\$DISPATCHER.MESSAGES
Network (NETWORK)	Network protocols supported by the dispatcher (such as TCP or DECNET) #1	string(128)	No	All	V\$DISPATCHER.NETWORK
Oracle PID (PID)	Dispatcher process's Oracle process ID#1	long	No	All	V\$DISPATCHER.PADDR
Owned (OWNED)	Number of circuits owned by the dispatcher#2	ulong	No	All	V\$DISPATCHER.OWNED
Process Name (NAME)	Name of dispatcher process#1	string(5)	No	All	V\$DISPATCHER.NAME
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIDS)#1	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector

Status (STATUS)	Dispatcher status:#1 WAIT: Idle SEND: Sending a message connection RECEIVE: Receiving a message CONNECT: Establishing connection DISCONNECT: Processing a disconnection request BREAK: Engaged in break processing OUTBOUND: Establishing outbound connection (up to 8.0) TERMINATE: Under termination processing (8.1 or later) ACCEPT: Accepting connection (no available information, 8.1 or later) REFUSE: Refusing connection (no available information, 8.1 or later)	string(16)	No	All	V\$DISPATCHER.STATUS
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2.7.21 Errorlog Detail (PD_PDEL)

Function

The Errorlog Detail (PD_PDEL) record stores performance data indicating the status (at a specific point in time) of error messages in the database alert file. Agent for Oracle creates one record for each error message. This is a multi-instance record.

The applicable messages begin with one of the following codes:

- DBA-
- EXP-
- IMP-
- LCC-
- OER-
- ORA-
- PCC-
- PLS-
- RTL-
- TNS-

Notes:

- If the value of the `background_dump_dest` initialization parameter for the Oracle database has not been set, you cannot collect this record.
- If you are collecting this record, do not delete an alert file while Agent for Oracle is running.

Table 2.55 Errorlog Detail (PD_PDEL) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	35	
Log	No	
LOGIF	(Blank)	

Key Fields

- Error Time (ERROR_TIME)
- Error # (ERROR_NUM)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 550 bytes

Table 2.56 Errorlog Detail (PD_PDEL) Fields

Errorlog Detail (PD_PDEL)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Error # (ERROR_NUM)	Error number	string(10)	No	All	Obtained from the alert files of the database and background process
Error File (ERROR_FILE)	Name of the file resulting in the error	string(256)	No	All	Obtained from the alert files of the database and background process
Error Time (ERROR_TIME)	Time the error occurred	string(24)	No	All	Obtained from the alert files of the database and background process
Message (MESSAGE)	Error message	string(256)	No	All	Obtained from the alert files of the database and background process
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDEL)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

2.7.22 GCS Stat Summary (PD_PDGC)

Function

The GCS Stat Summary (PD_PDGC) record stores performance data indicating the status (at a specific point in time) of the Global Cache Service (GCS). This record is for Oracle Real Application Clusters.

Table 2.57 GCS Stat Summary (PD_PDGC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle Real Application Clusters instance

Record Size

- Fixed part: 754 bytes
- Variable part: 0 bytes

Table 2.58 GCS Stat Summary (PD_PDGC) Fields

GCS Stat Summary (PD_PDGC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
GC Blocks Corrupt (GLOBAL_CACHE_BLOCKS_CORRUPT)	Number of blocks that resulted in some damage or checksum error during interconnection	ulong	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache blocks corrupt' GROUP BY INST_ID
GC Blocks Lost (GLOBAL_CACHE_BLOCKS_LOST)	Number of times a global cache request resulted in a timeout due to damage or checksum errors during interconnection	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache blocks lost' GROUP BY INST_ID

GC Convert Time (GLOBAL_CACHE_CONVERT_TIME)	Total time that elapsed during lock conversion	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache convert time' GROUP BY INST_ID
GC Converts (GLOBAL_CACHE_CONVERTS)	Number of lock conversions in the global cache	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache convert' GROUP BY INST_ID
GC CRBlock Rec Per MilliSec (GLOBAL_CACHE_CRBLOCK_RECEIVE_PER_MILLISEC)	Length of time that the foreground process waited for each CR block that was sent via an interconnection (in milliseconds)	double	No	9.0	(Global_Cache_CRBlock_Receive_Time * 10) / Global_Cache_CRBlocks_Received GROUP BY INST_ID
GC CRBlock Receive Time (GLOBAL_CACHE_CRBLOCK_RECEIVE_TIME)	Total length of time the foreground process waited for a CR block that was sent via an interconnection	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache cr block receive time' GROUP BY INST_ID
GC CRBlocks Received (GLOBAL_CACHE_CRBLOCKS_RECEIVED)	Total number of blocks received	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache cr blocks received' GROUP BY INST_ID
GC Get Per MilliSec (GLOBAL_CACHE_GET_PER_MILLISEC)	Wait time per request (in milliseconds)	double	No	9.0	(Global_Cache_Get_Time * 10) / Global_Cache_Gets GROUP BY INST_ID
GC Get Time (GLOBAL_CACHE_GET_TIME)	Total wait time	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache get time' GROUP BY INST_ID
GC Gets (GLOBAL_CACHE_GETS)	Number of locks obtained	double	No	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache gets' GROUP BY INST_ID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDGC)	string (4)	No	All	Agent Collector

Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
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2.7.23 GCS Stat Summary Interval (PI_PIGC)

Function

GCS Stat Summary Interval (PI_PIGC) record stores performance data, taken at specific intervals, about the Global Cache Service (GCS). This record is for Oracle Real Application Clusters.

Table 2.59 GCS Stat Summary Interval (PI_PIGC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle Real Application Clusters instance

Record Size

- Fixed part: 874 bytes
- Variable part: 0 bytes

Table 2.60 GCS Stat Summary Interval (PI_PIGC) Fields

GCS Stat Summary Interval (PI_PIGC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
GC Blocks Corrupt (GLOBAL_CACHE_BLOCKS_CORRUPT)	Number of blocks that resulted in some damage or checksum error during interconnection ^{#2}	ulong	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache blocks corrupt' GROUP BY INST_ID
GC Blocks Lost (GLOBAL_CACHE_BLOCKS_LOST)	Number of times a global cache request resulted in a timeout due to damage or checksum errors during interconnection ^{#2}	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache blocks lost' GROUP BY INST_ID
GC Convert Time (GLOBAL_CACHE_CONVERT_TIME)	Total time that elapsed during lock conversion ^{#2}	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache convert time' GROUP BY INST_ID

GCS Stat Summary Interval (PI_PIGC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
GC Converts (GLOBAL_CACHE_CONVERTS)	Number of lock conversions in the global cache#2	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache convert' GROUP BY INST_ID
GC CRBlock Rec Per MilliSec (GLOBAL_CACHE_CRBLOCK_RECEIVE_PER_MILLISEC)	Length of time that the foreground process waited for each CR block that was sent via interconnection (in milliseconds)#2	double	No	9.0	(Global_Cache_CRBlock_Receive_Time * 10) / Global_Cache_CRBlocks_Received GROUP BY INST_ID
GC CRBlock Receive Time (GLOBAL_CACHE_CRBLOCK_RECEIVE_TIME)	Total length of time the foreground process waited for a CR block that was sent via interconnection#2	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache cr block receive time' GROUP BY INST_ID
GC CRBlocks Received (GLOBAL_CACHE_CRBLOCKS_RECEIVED)	Total number of blocks received#2	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache cr blocks received' GROUP BY INST_ID
GC Get Per MilliSec (GLOBAL_CACHE_GET_PER_MILLISEC)	Wait time per request (in milliseconds)#2	double	No	9.0	(Global_Cache_Get_Time * 10) / Global_Cache_Gets GROUP BY INST_ID
GC Get Time (GLOBAL_CACHE_GET_TIME)	Total wait time#2	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache get time' GROUP BY INST_ID
GC Gets (GLOBAL_CACHE_GETS)	Number of locks obtained#2	double	Yes	9.0	GV\$SYSSTAT.VALUE WHERE NAME = 'global cache gets' GROUP BY INST_ID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIGC)#1	string (4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector

2.7.24 Instance (PD_PDI)

Function

The Instance (PD_PDI) record stores performance data indicating the status (at a specific point in time) of an instance.

Table 2.61 Instance (PD_PDI) Default and Changeable Values

Item	Default value	Changeable?
Collection Interval	600	Yes
Collection Offset	50	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 1,094 bytes
- Variable part: 0 bytes

Table 2.62 Instance (PD_PDI) Fields

Instance (PD_PDI)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Host (HOST)	Instance's host machine name	string(30)	No	All	V\$INSTANCE.HOST_NAME
ORACLE_HOME (ORACLE_HOME)	ORACLE_HOME environment variable	string(255)	No	All	--
ORACLE_SID (ORACLE_SID)	ORACLE_SID environment variable	string(30)	No	All	--
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDI)	string(4)	No	All	Agent Collector
Restricted Mode (RESTRICTED_MODE)	This field is not supported. 1 if the instance is in restricted mode; otherwise, 0	short	No	Not supported	V\$INSTANCE.VALUE.LOGINS
Session Current (SESSION_CURRENT)	Current number of concurrent user sessions	ulong	No	All	V\$LICENSE.SESSESSIONS_CURRENT
Session Highwater (SESSION_HIGHWATER)	Maximum number of concurrent user sessions since the instance started	ulong	No	All	V\$LICENSE.SESSESSIONS_HIGHWATER
Sessions Max (SESSIONS_MAX)	Maximum number of concurrent user sessions permitted for the instance	ulong	No	All	V\$LICENSE.SESSESSIONS_MAX
Sessions Warning (SESSIONS_WARNING)	Warning limit to the concurrent user sessions for the instance	ulong	No	All	V\$LICENSE.SESSESSIONS_WARNING
SGA Database Buffers (SGA_DATABASE_BUFFERS)	Size of SGA database buffer in bytes	double	No	All	V\$SGA.VALUE where V\$SGA.NAME = 'Database Buffers'
SGA Fixed Size (SGA_FIXED_SIZE)	Size of SGA fixed memory in bytes	double	No	All	V\$SGA.VALUE where V\$SGA.NAME = 'Fixed Size'
SGA Redo Buffers (SGA_REDO_BUFFERS)	Size of SGA REDO buffer in bytes	double	No	All	V\$SGA.VALUE where V\$SGA.NAME = 'Redo Buffers'

SGA Variable Size (SGA_VARIABLE_SIZE)	Size of SGA variable memory in bytes	double	No	All	V\$SGA.VALUE where V\$SGA.NAME = 'Variable Size'
Shutdown Pending (SHUTDOWN_PENDING)	1 if shutdown is on hold; otherwise, 0	short	No	All	V\$INSTANCE.SH UTDOWN_PENDIN G
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Startup Time (STARTUP_TIME)	Start date and time	string(20)	No	All	V\$INSTANCE.ST ARTUP_TIME
Users Max (USERS_MAX)	Maximum number of users permitted for the database	long	No	All	V\$LICENSE.USE RS_MAX
Version (VERSION)	Version of Oracle database	string(20)	No	All	PRODUCT_COMPO NENT_VERSION

2.7.25 Latch (PD_PDLA)

Function

The Latch (PD_PDLA) record stores performance data indicating the status (at a specific point in time) of latches. Agent for Oracle creates one record for each latch in an instance. This is a multi-instance record.

Table 2.63 Latch (PD_PDLA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	10	
Log	No	
LOGIF	(Blank)	

Key Fields

- Latch # (LATCH_NUM)
- Level # (LEVEL_NUM)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 257 bytes

Table 2.64 Latch (PD_PDLA) Fields

Latch (PD_PDLA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addr (ADDR)	Latch address	string(16)	No	All	V\$LATCH.ADDR
Gets (GETS)	Number of times latch was obtained by waiting	double	No	All	V\$LATCH.GETS
Immediate Gets (IMMEDIATE_GETS)	Number of times latch was obtained without waiting	double	No	All	V\$LATCH.IMMEDIATE_GETS

Latch (PD_PDLA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Immediate Hit % (IMMEDIATE_HIT_P ERCENTAGE)	Rate at which latch was obtained without waiting	double	No	All	(1- (V\$LATCH.IMMEDIATE_ MISSES / (V\$LATCH.IMMEDIATE_ GETS + V\$LATCH.IMMEDIATE_M ISSES))) * 100
Immediate Misses (IMMEDIATE_MISSE S)	Number of times latch was not obtained immediately (without waiting)	double	No	All	V\$LATCH.IMMEDIATE_M ISSES
Latch # (LATCH_NUM)	Latch number	short	No	All	V\$LATCH.LATCH#
Latch Name (NAME)	Latch name	string(50)	No	All	V\$LATCHNAME.NAME
Level # (LEVEL_NUM)	Latch level	double	No	All	V\$LATCH.LEVEL#
Misses (MISSES)	Number of times latch was not obtained the first time but obtained later by waiting	double	No	All	V\$LATCH.MISSES
Oracle PID (PID)	Process ID to which the latch belongs	short	No	All	V\$LATCHHOLDER.PID
OS PID (OS_PID)	OS's client process ID	string(9)	No	All	V\$SESSION.PROCESS where V\$LATCHHOLDER.SID = V\$SESSION.SID
OS User (OS_USER)	OS's client user name	string(10)	No	All	V\$SESSION.OSUSER where V\$LATCHHOLDER.SID = V\$SESSION.SID
Program (PROGRAM)	Name of program being executed	string(48)	No	All	V\$SESSION.PROGRAM where V\$LATCHHOLDER.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TY PE)	Record name (always PDLA)	string(4)	No	All	Agent Collector

Latch (PD_PDLA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
SID (SID)	Session ID to which the latch belongs	short	No	All	V\$LATCHHOLDER.SID
Sleeps (SLEEPS)	Number of times the system slept when it needed to wait	double	No	All	V\$LATCH.SLEEPS
Spin Gets (SPIN_GETS)	Number of latch requests that can wait that failed the first time but were successful during spinning	double	No	All	V\$LATCH.SPIN_GETS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
User (USERNAME)	Oracle user name	string(30)	No	All	V\$SESSION.USERNAME
Waiters Woken (WAITERS_WOKEN)	Number of times standby sleep was released	double	No	All	V\$LATCH.WAITERS_WOKEN
Waits Holding Latch (WAITS_HOLDING_LATCH)	Number of waits when other latches were held	double	No	All	V\$LATCH.WAITS_HOLDING_LATCH
Willing To Wait Hit % (WILLING_TO_WAIT_HIT_PERCENTAGE)	Rate at which latch was obtained by waiting	double	No	All	(1 - (V\$LATCH.MISSES / V\$LATCH.GETS)) * 100

2.7.26 Latch Interval (PI_PILA)

Function

The Latch Interval (PI_PILA) record stores performance data, taken at specific intervals, about latches. Agent for Oracle creates one record for each latch in an instance. This is a multi-instance record.

Table 2.65 Latch Interval (PI_PILA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	5	
Log	No	
LOGIF	(Blank)	

Key Fields

Addr (ADDR)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 393 bytes

Table 2.66 Latch Interval (PI_PILA) Fields

Latch Interval (PI_PILA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addr (ADDR)	Latch address ^{#1}	string(16)	No	All	V\$LATCH.ADDR
Gets (GETS)	Number of times latch was obtained by waiting ^{#2}	double	Yes	All	V\$LATCH.GETS
Immediate Gets (IMMEDIATE_GETS)	Number of times latch was obtained without waiting ^{#2}	double	Yes	All	V\$LATCH.IMMEDIATE_GETS
Immediate Hit % (IMMEDIATE_HIT_PERCENTAGE)	Rate at which latch was obtained without waiting ^{#2}	double	No	All	(1 - (V\$LATCH.IMMEDIATE_MISSES / (V\$LATCH.IMMEDIATE_GETS +

					V\$LATCH.IMMEDIATE_MISSES)) * 100
Immediate Misses (IMMEDIATE_MISSES)	Number of times latch was not obtained immediately (without waiting)#2	double	Yes	All	V\$LATCH.IMMEDIATE_MISSES
Latch # (LATCH_NUM)	Latch number#1	double	No	All	V\$LATCH.LATCH#
Latch Name (NAME)	Latch name#1	string(50)	No	All	V\$LATCHNAME.NAME
Level # (LEVEL_NUM)	Latch level#1	double	No	All	V\$LATCH.LEVEL#
Misses (MISSES)	Number of times latch was not obtained the first time but obtained later by waiting#2	double	Yes	All	V\$LATCH.MISSES
Oracle PID (PID)	Process ID to which the latch belongs#1	long	No	All	V\$LATCHHOLDER.PID
OS PID (OS_PID)	OS's client process ID#1	string(9)	No	All	V\$SESSION.PROCESS where V\$LATCHHOLDER.SID = V\$SESSION.SID
OS User (OS_USER)	OS's client user name#1	string(10)	No	All	V\$SESSION.OSUSER where V\$LATCHHOLDER.SID = V\$SESSION.SID
Program (PROGRAM)	Name of program being executed#1	string(48)	No	All	V\$SESSION.PROGRAM where V\$LATCHHOLDER.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PILA)#1	string(4)	No	All	Agent Collector
SID (SID)	Session ID to which the latch belongs#1	ulong	No	All	V\$LATCHHOLDER.SID
Sleeps (SLEEPS)	Number of times the system slept when it needed to wait#2	double	Yes	All	V\$LATCH.SLEEPS
Spin Gets (SPIN_GETS)	Number of latch requests that can wait that failed the first time but were successful during spinning#2	double	Yes	All	V\$LATCH.SPIN_GETS

Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
User (USERNAME)	Oracle user name#1	string(30)	No	All	V\$SESSION.USERNAME
Waiters Woken (WAITERS_WOKEN)	Number of times standby sleep was released#2	double	Yes	All	V\$LATCH.WAITERS_WOKEN
Waits Holding Latch (WAITS_HOLDING_LATCH)	Number of waits when other latches were held#2	double	Yes	All	V\$LATCH.WAITS_HOLDING_LATCH
Willing To Wait Hit % (WILLING_TO_WAIT_HIT_PERCENTAGE)	Rate at which latch was obtained by waiting#2	double	No	All	(1 - (V\$LATCH.MISSES / (V\$LATCH.GETS + V\$LATCH.MISSES))) * 100

2.7.27 Library Cache (PD_PDLC)

Function

The Library Cache (PD_PDLC) record stores performance data indicating the status (at a specific point in time) of library cache management. Agent for Oracle creates one record for each library cache. This is a multi-instance record.

Table 2.67 Library Cache (PD_PDLC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	35	
Log	No	
LOGIF	(Blank)	

Key Fields

Namespace (NAMESPACE)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 88 bytes

Table 2.68 Library Cache (PD_PDLC) Fields

Library Cache (PD_PDLC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Get Hit % (GET_HIT_PERCENTAGE)	Percentage ratio of GETHITS to GETS	double	No	All	$(V\$\text{LIBRARYCACHE.GETHITS} / V\$\text{LIBRARYCACHE.GETS}) * 100$
Get Hits (GET_HITS)	Number of times the handle was already in cache (if the handle was not in cache, a miss results and the system allocates the handle and places it in cache)	double	No	All	V\$\text{LIBRARYCACHE.GETHITS}
Gets (GETS)	Number of times the system requested handle to a library	double	No	All	V\$\text{LIBRARYCACHE.GETS}

	object in this name space				
Invalidations (INVALIDATIONS)	Number of times a nonpermanent library object (such as a shared SQL area) was invalid	double	No	All	V\$LIBRARYCACHE.INVALIDATIONS
Miss % (MISS_PERCENTAGE)	Percentage ratio of the number of reloads to the number of acquisition requests to objects in the library cache issued by the system	double	No	All	$(V$LIBRARYCACHE.RELOADS / V$LIBRARYCACHE.PINS) * 100$
Namespace (NAMESPACE)	Name space in the library cache	string (15)	No	All	V\$LIBRARYCACHE.NAMESPACE
Pin Hit % (PIN_HIT_PERCENTAGE)	Percentage ratio of PINHITS to PINS	double	No	All	$(V$LIBRARYCACHE.PINHITS / V$LIBRARYCACHE.PINS) * 100$
Pin Hits (PIN_HITS)	Number of times the object acquired by the system was already in cache and initialized	double	No	All	V\$LIBRARYCACHE.PINHITS
Pins (PINS)	Number of times the system issued an acquisition request to an object in cache to access it	double	No	All	V\$LIBRARYCACHE.PINS
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDLG)	string (4)	No	All	Agent Collector
Reloads (RELOADS)	Number of times the system needed to reinitialize a library object and load data because it had not been used recently or was invalid	double	No	All	V\$LIBRARYCACHE.RELOADS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

2.7.28 Library Cache Interval (PI_PILC)

Function

The Library Cache Interval (PI_PILC) record stores performance data, taken at specific intervals, about the library cache. Agent for Oracle creates one record for each library cache. This is a multi-instance record.

Table 2.69 Library Cache Interval (PI_PILC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	25	
Log	No	
LOGIF	(Blank)	

Key Fields

Namespace (`NAMESPACE`)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 196 bytes

Table 2.70 Library Cache Interval (PI_PILC) Fields

Library Cache Interval (PI_PILC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Get Hit % (<code>GET_HIT_PERCENTAGE</code>)	Percentage ratio of GETHITS to GETS during the interval#2	double	No	All	(<code>V\$LIBRARYCACHE.GETHITS</code> / <code>V\$LIBRARYCACHE.GETS</code>) * 100
Get Hits (<code>GET_HITS</code>)	Number of times the handle was already in cache during the interval#2	double	Yes	All	<code>V\$LIBRARYCACHE.GETHITS</code>
Gets (<code>GETS</code>)	Number of times the system requested handle to a library object in this name space during the interval#2	double	Yes	All	<code>V\$LIBRARYCACHE.GETS</code>

Invalidations (INVALIDATIONS)	Number of times a nonpermanent library object (such as a shared SQL area) was invalid ^{#2}	double	Yes	All	V\$LIBRARYCACHE.INVALIDATIONS
Miss % (MISS_PERCENTAGE)	Percentage ratio of the number of reloads to the number of acquisition requests to objects in the library cache issued by the system ^{#2}	double	No	All	(V\$LIBRARYCACHE.RELOADS / V\$LIBRARYCACHE.PINS) * 100
Namespace (NAMESPACE)	Name space in the library cache ^{#1}	string (15)	No	All	V\$LIBRARYCACHE.NAMESPACE
Pin Hit % (PIN_HIT_PERCENTAGE)	Percentage ratio of PINHITS to PINS during the interval ^{#2}	double	No	All	(V\$LIBRARYCACHE.PINHITS / V\$LIBRARYCACHE.PINS) * 100
Pin Hits (PIN_HITS)	Number of times the object accessed by the system was already in cache and initialized during the interval ^{#2}	double	Yes	All	V\$LIBRARYCACHE.PINHITS
Pins (PINS)	Number of times the system issued an acquisition request to an object in cache to access it during the interval ^{#2}	double	Yes	All	V\$LIBRARYCACHE.PINS
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PILC) ^{#1}	string (4)	No	All	Agent Collector
Reloads (RELOADS)	Number of times the system needed to reinitialize a library object and load data because it had not been used recently or was invalid during the interval ^{#2}	double	Yes	All	V\$LIBRARYCACHE.RELOADS
Start Time (START_TIME)	Collection start time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector

2.7.29 Lock (PD_PDLO)

Function

The Lock (PD_PDLO) record stores performance data indicating the status (at a specific point in time) of locks. Agent for Oracle creates one record for each lock in an instance. This is a multi-instance record.

If you cannot view the performance data in this record, create Oracle's static data dictionary view `DBA_WAITERS`. To create the static data dictionary view `DBA_WAITERS`, you must execute the `CATBLOCK.SQL` script that is provided by Oracle.

Table 2.71 Lock (PD_PDLO) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	55	
Log	No	
LOGIF	(Blank)	

Key Fields

- Addr (ADDR)
- SID (SID)

Lifetime

From the activation to release of a lock

Record Size

- Fixed part: 678 bytes
- Variable part: 193 bytes

Table 2.72 Lock (PD_PDLO) Fields

Lock (PD_PDLO)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addr (ADDR)	Lock address	string(16)	No	All	V\$LOCK.KADDR
Blocking (BLOCKING)	Whether or not this lock blocks another lock (If it does, the value in this field is 1. Otherwise, the value is 0.)	short	No	All	V\$LOCK.BLOCK

Blocking Sessions (BLOCKING_SESSIONS)	Number of sessions that are blocked by waiting for lock	short	No	All	count (WAITING_SESSION) from DBA_WAITERS where dba_waiters.lock_id 1 = Id1 and dba_waiters.lock_id 2 = Id2 and dba_waiters.holding_session = SID and dba_waiters.mode_held = Lock_Mode
Current Mode Time (CURRENT_MODE_TIME)	Time since the current mode was authorized	ulong	No	All	V\$LOCK.CTIME
ID1 (ID1)	Lock ID 1	ulong	No	All	V\$LOCK.ID1
ID2 (ID2)	Lock ID 2	ulong	No	All	V\$LOCK.ID2
Lock Mode (LOCK_MODE)	Lock mode. Valid values are 1 (null), 2 (row share), 3 (row exclusive), 4 (share), 5 (share row exclusive), and 6 (exclusive).	string(20)	No	All	V\$LOCK.LMODE
Program (PROGRAM)	Name of program being executed	string(48)	No	All	V\$SESSION.PROGRAM where V\$LOCK.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDLO)	string(4)	No	All	Agent Collector
Request Mode (REQUEST_MODE)	Requested lock mode. Valid values are 1 (null), 2 (row share), 3 (row exclusive), 4 (share), 5 (share row exclusive), and 6 (exclusive).	string(20)	No	All	V\$LOCK.REQUEST
SID (SID)	Session ID holding the lock	short	No	All	V\$LOCK.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Type (TYPE)	Lock type	string(2)	No	All	V\$LOCK.TYPE
Type Text (TYPE_TEXT)	Details of lock type	string(32)	No	All	V\$LOCK.TYPE

User (USERNAME)	Oracle user name	string(30)	No	All	V\$SESSION.USERNAME where V\$LOCK.SID = V\$SESSION.SID
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2.7.30 Lock Activity Interval (PI_P IPL)

Function

The Lock Activity Interval (PI_P IPL) record stores performance data, taken at specific intervals, about PCM lock conversions that have occurred. Agent for Oracle creates one record each time a PCM lock conversion occurs. This is a multi-instance record, and is for Oracle Real Application Clusters.

Table 2.73 Lock Activity Interval (PI_P IPL) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	55	
Log	No	
LOGIF	(Blank)	

Key Fields

- Initial State (INITIAL_STATE)
- Final State (FINAL_STATE)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 84 bytes

Table 2.74 Lock Activity Interval (PI_P IPL) Fields

Lock Activity Interval (PI_P IPL)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Action (ACTION)	Description of lock conversion ^{#1}	string(55)	No	All	V\$LOCK_ACTIVITY.ACTION_VAL
Conversions (CONVERSIONS)	Number of times a lock operation was executed ^{#2}	long	Yes	All	V\$LOCK_ACTIVITY.COUNTER
Final State (FINAL_STATE)	Final PCM lock status ^{#1}	string(5)	No	All	V\$LOCK_ACTIVITY.TO_VAL
Initial State (INITIAL_STATE)	Initial PCM lock status ^{#1}	string(5)	No	All	V\$LOCK_ACTIVITY.FROM_VAL

Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIPL)#1	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector

2.7.31 Lock Interval (PI_PILO)

Function

The Lock Interval (PI_PILO) record stores performance data, taken at specific intervals, about locks. Agent for Oracle creates one record for each lock in an instance. This is a multi-instance record.

If you cannot view the performance data in this record, create Oracle's static data dictionary view `DBA_WAITERS`. To create the static data dictionary view `DBA_WAITERS`, you must execute the `CATBLOCK.SQL` script that is provided by Oracle.

Table 2.75 Lock Interval (PI_PILO) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	55	
Log	No	
LOGIF	(Blank)	

Key Fields

- Addr (ADDR)
- SID (SID)

Lifetime

From the activation to release of a lock

Record Size

- Fixed part: 678 bytes
- Variable part: 217 bytes

Table 2.76 Lock Interval (PI_PILO) Fields

Lock Interval (PI_PILO)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addr (ADDR)	Lock address ^{#1}	string (16)	No	All	V\$LOCK.KADDR
Blocking (BLOCKING)	Whether or not this lock blocks another lock (If it does, the value in this field is 1. Otherwise, the value is 0.) ^{#1}	short	No	All	V\$LOCK.BLOCK

Lock Interval (PI_PILO)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Blocking Sessions (BLOCKING_SESSIONS)	Number of sessions that are blocked by waiting for lock# ¹	ulong	No	All	count (WAITING_SESSION) from DBA_WAITERS where dba_waiters.lock_id1 = Id1 and dba_waiters.lock_id2 = Id2 and dba_waiters.holding_session = SID and dba_waiters.mode_held = Lock_Mode
Current Mode Time (CURRENT_MODE_TIME)	Time since the current mode was authorized# ²	ulong	Yes	All	V\$LOCK.CTIME
ID1 (ID1)	Lock ID 1# ¹	double	No	All	V\$LOCK.ID1
ID2 (ID2)	Lock ID 2# ¹	double	No	All	V\$LOCK.ID2
Lock Mode (LOCK_MODE)	Lock mode. Valid values are 1 (null), 2 (row share), 3 (row exclusive), 4 (share), 5 (share row exclusive), and 6 (exclusive).# ¹	string (20)	No	All	V\$LOCK.LMODE
Program (PROGRAM)	Name of program being executed# ¹	string (48)	No	All	V\$SESSION.PROGRAM where V\$LOCK.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record# ¹	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PILO)# ¹	string (4)	No	All	Agent Collector
Request Mode (REQUEST_MODE)	Requested lock mode. Valid values are 1 (null), 2 (row share), 3 (row exclusive), 4 (share), 5 (share row exclusive), and 6 (exclusive).# ¹	string (20)	No	All	V\$LOCK.REQUEST
SID (SID)	Session ID holding or having the lock# ¹	ulong	No	All	V\$LOCK.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record# ¹	time_t	No	All	Agent Collector

Lock Interval (PI_PIL0)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Type (TYPE)	Lock type ^{#1}	string (2)	No	All	V\$LOCK.TYPE
Type Text (TYPE_TEXT)	Details of lock type ^{#1}	string (32)	No	All	V\$LOCK.TYPE
User (USERNAME)	Oracle user name ^{#1}	string (30)	No	All	V\$SESSION.USERNAME where V\$LOCK.SID = V\$SESSION.SID

2.7.32 Lock Waiters (PD_PDLW)

Function

The Lock Waiters (PD_PDLW) record stores performance data indicating the status (at a specific point in time) of all sessions waiting for lock and holding lock. Agent for Oracle creates one record for each lock that a session is waiting for. This is a multi-instance record.

If you cannot view the performance data in this record, create Oracle's static data dictionary view `DBA_WAITERS`. To create the static data dictionary view `DBA_WAITERS`, you must execute the `CATBLOCK.SQL` script that is provided by Oracle.

Table 2.77 Lock Waiters (PD_PDLW) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	60	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the start to the end of a deadlock

Record Size

- Fixed part: 678 bytes
- Variable part: 424 bytes

Table 2.78 Lock Waiters (PD_PDLW) Fields

Lock Waiters (PD_PDLW)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Holding OS PID (HOLDING_PID)	OS's client process ID corresponding to the session holding the lock	string(30)	No	All	V\$SESSION.PROCESS
Holding Session (HOLDING_SESSION)	Session ID holding the lock	short	No	All	DBA_WAITERS.HOLDING_SESSION
Holding User (HOLDING_USER)	User name for the session holding the lock	string(30)	No	All	V\$SESSION.USERNAME

Lock ID1 (LOCK_ID1)	Lock ID 1	string(40)	No	All	DBA_WAITERS.LOCK_ID 1
Lock ID2 (LOCK_ID2)	Lock ID 2	string(40)	No	All	DBA_WAITERS.LOCK_ID 2
Lock Type (TYPE)	Lock type	string(30)	No	All	DBA_WAITERS.TYPE
Mode Held (MODE_HELD)	Lock mode held during data collection	string(40)	No	All	DBA_WAITERS.MODE_HE LD
Mode Requested (MODE_REQUESTED)	Lock mode requested during data collection	string(40)	No	All	DBA_WAITERS.MODE_RE QUESTED
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDLW)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Waiting OS PID (WAITING_PID)	OS's client process ID corresponding to the session waiting for the lock	string(30)	No	All	V\$SESSION.PROCESS
Waiting Session (WAITING_SESSION)	Session ID waiting for the lock	short	No	All	DBA_WAITERS.WAITING _SESSION
Waiting User (WAITING_USER)	User name for the session waiting for the lock	string(30)	No	All	V\$SESSION.USERNAME
XID (XID)	ID used internally to identify the record	string(100)	No	All	DBA_WAITERS.WAITING _SESSION + DBA_WAITERS.HOLDING _SESSION + DBA_WAITERS.LOCK_ID 1 + DBA_WAITERS.LOCK_ID 2

2.7.33 Multi-Threaded Server (PD_PDMT)

Function

The Multi - Threaded Server (PD_PDMT) record stores performance data indicating the status (at a specific point in time) of the multi-thread server (MTS) options.

Table 2.79 Multi-Threaded Server (PD_PDMT) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	50	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an MTS environment Oracle instance

Record Size

- Fixed part: 894 bytes
- Variable part: 0 bytes

Table 2.80 Multi-Threaded Server (PD_PDMT) Fields

Multi-Threaded Server (PD_PDMT)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Queue Wait (QUEUES_AVERAGE_WAIT)	Average wait time per item	double	No	All	V\$QUEUE.WAIT / V\$QUEUE.TOTALQ
Circuits (CIRCUITS)	Number of circuits	ulong	No	All	COUNT (V\$CIRCUIT)
Dispatchers (DISPATCHERS)	Number of dispatchers	ulong	No	All	COUNT (V\$DISPATCHER)
Dispatchers Busy (DISPATCHERS_BUSY)	Total busy time of all dispatchers	double	No	All	SUM (V\$DISPATCHER.BUSY)
Dispatchers Busy % (DISPATCHERS_PERCENT_BUSY)	Percentage ratio of the time all dispatchers were	double	No	All	(SUM (V\$DISPATCHER.BUSY) / (SUM (V\$DISPATCHER.IDLE)

	busy				+ SUM(V\$DISPATCHER.BUSY)) * 100
Dispatchers Idle (DISPATCHERS_IDLE)	Total idle time of all dispatchers	double	No	All	SUM(V\$DISPATCHER.IDLE)
Dispatchers Idle % (DISPATCHERS_PERCENT _IDLE)	Percentage ratio of the time all dispatchers were idle	double	No	All	(SUM(V\$DISPATCHER.IDLE) / (SUM(V\$DISPATCHER.IDLE) + SUM(V\$DISPATCHER.BUSY)) * 100
Dispatchers Messages (DISPATCHERS_MESSAGE S)	Total number of messages processed by all dispatchers	double	No	All	SUM(V\$DISPATCHER.MESSAG ES)
Items Queued (QUEUES_QUEUED)	Total number of items currently in all queues	double	No	All	SUM(V\$QUEUE.QUEUED)
MTS Max Servers % (PERCENT_MTS_MAX_SER VERS)	Percentage ratio of the MTS servers to the MTS_MAX_SERVE RS parameter value in the init.ora file	double	No	All	(COUNT(V\$SHARED_SERVER) / init.ora MTS_MAX_SERVERS) * 100
MTS Servers Highwater (SERVERS_HIGHWATER)	Maximum number of multi-thread servers (MTS) that were running at any one time since the instance started	long	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: V\$MTS.SERVERS_HIGHWATER ▪ For Oracle8i or later, which has locally managed temporary tablespaces: V\$SHARED_SERVER_MONITOR.SERVERS_HIGHWATER
MTS Servers Started (SERVERS_STARTED)	Total number of multi-thread servers (MTS) since the instance started (this value does not include multi-thread servers started during startup processing)	long	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: V\$MTS.SERVERS_STARTED ▪ For Oracle8i or later, which has locally managed temporary tablespaces: V\$SHARED_SERVER_MONITOR.SERVERS_STARTED
MTS Servers Terminated (SERVERS_TERMINATED)	Total number of multi-thread servers (MTS) that were terminated by Oracle since	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: V\$MTS.SERVERS_TERMINATED

	the instance started				<p>ATED</p> <ul style="list-style-type: none"> For Oracle8i or later, which has locally managed temporary tablespaces: V\$SHARED_SERVER_MONITOR.SERVERS_TERMINATED
Parallel Query Servers (PARALLEL_QUERY_SERVERS)	Number of parallel query servers	long	No	All	COUNT (V\$PQ_SLAVE)
PQS Busy (PQS_BUSY)	Length of time all parallel query servers were busy (in minutes)	double	No	All	SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL)
PQS Busy % (PQS_PERCENT_BUSY)	Percentage ratio of the time all parallel query servers were busy	double	No	All	(SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL) / (SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL) + SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL))) * 100
PQS CPU (PQS_CPU)	CPU time used by all parallel query servers to process SQL statements	double	No	All	SUM (V\$PQ_SLAVE.CPU_SECS_TOTAL)
PQS Idle (PQS_IDLE)	Length of time all parallel query servers were idle (in minutes)	double	No	All	SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL)
PQS Idle % (PQS_PERCENT_IDLE)	Percentage ratio of the time all parallel query servers were idle	double	No	All	(SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL) / (SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL) + SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL))) * 100
PQS Msgs Rcvd (PQS_MSGS_RCVD)	Total number of messages received by all parallel query servers	double	No	All	SUM (V\$PQ_SLAVE.MSGS_RCVD_TOTAL)
PQS Msgs Sent (PQS_MSGS_SENT)	Total number of messages sent by all parallel query servers	double	No	All	SUM (V\$PQ_SLAVE.MSGS_SENT_TOTAL)
PQS Sessions (PQS_SESSIONS)	Number of sessions being used by parallel query servers	ulong	No	All	SUM (V\$PQ_SLAVE.SESSIONS)
Queues (QUEUES)	Number of queues	ulong	No	All	COUNT (V\$QUEUE)
Record Time (RECORD_TIME)	Collection termination time for the performance data	time_t	No	All	Agent Collector

	stored in the record				
Record Type (INPUT_RECORD_TYPE)	Record name (always PDMT)	string(4)	No	All	Agent Collector
Shared Servers (SHARED_SERVERS)	Number of shared servers	long	No	All	COUNT(V\$SHARED_SERVER)
Shared Servers Busy (SHARED_SERVERS_BUSY)	Total length of time during which all shared servers were busy, in 1/100 seconds	double	No	All	SUM(V\$SHARED_SERVER.BUSY)
Shared Servers Busy % (SHARED_SERVERS_PERCENT_BUSY)	Percentage ratio of the time during which all shared servers were busy	double	No	All	$(V$SHARED_SERVER.BUSY / (V$SHARED_SERVER.IDLE + V$SHARED_SERVER.BUSY)) * 100$
Shared Servers Idle (SHARED_SERVERS_IDLE)	Total length of time during which all shared servers were idle, in 1/100 seconds	double	No	All	SUM(V\$SHARED_SERVER.IDLE)
Shared Servers Idle % (SHARED_SERVERS_PERCENT_IDLE)	Percentage ratio of the time during which all shared servers were idle	double	No	All	$(V$SHARED_SERVER.IDLE / (V$SHARED_SERVER.IDLE + V$SHARED_SERVER.BUSY)) * 100$
Shared Servers Messages (SHARED_SERVERS_MESSAGES)	Total number of messages processed by all shared servers	double	No	All	SUM(V\$SHARED_SERVER.MESSAGES)
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Total Items Queued (QUEUES_TOTAL_QUEUED)	Total number of items in all queues	double	No	All	SUM(V\$QUEUE.TOTALQ)
Total Queues Wait (QUEUES_WAIT)	Total length of time all items were queued	double	No	All	SUM(V\$QUEUE.WAIT)

2.7.34 Multi-Threaded Server Interval (PI_PIMT)

Function

The Multi - Threaded Server Interval (PI_PIMT) record stores performance data, taken at specific intervals, about the multi-thread server (MTS) options.

Table 2.81 Multi-Threaded Server Interval (PI_PIMT) Default and Changeable Values

Item	Default value	Changeable?
Collection Interval	300	Yes
Collection Offset	30	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an MTS environment Oracle instance

Record Size

- Fixed part: 1,274 bytes
- Variable part: 0 bytes

Table 2.82 Multi-Threaded Server Interval (PI_PIMT) Fields

Multi-Threaded Server Interval (PI_PIMT)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Queue Wait (QUEUES_AVERAGE_WAIT)	Average wait time per item#2	double	No	All	V\$QUEUE.WAIT / V\$QUEUE.TOTALQ
Circuits (CIRCUITS)	Number of circuits#2	ulong	No	All	COUNT (V\$CIRCUIT)
Dispatchers (DISPATCHERS)	Number of dispatchers#2	ulong	No	All	COUNT (V\$DISPATCHER)
Dispatchers Busy (DISPATCHERS_BUSY)	Total busy time of all dispatchers#2	double	Yes	All	SUM (V\$DISPATCHER.BUSY)
Dispatchers Busy % (DISPATCHERS_PERCENT_BUSY)	Percentage ratio of the time all dispatchers	double	No	All	(SUM (V\$DISPATCHER.BUSY)) / (SUM (V\$DISPATCHER.IDLE) +

	were busy ^{#2}				$SUM(V\$\$DISPATCHER.BUSY)) * 100$
Dispatchers Idle (DISPATCHERS_IDLE)	Total idle time of all dispatchers ^{#2}	double	Yes	All	$SUM(V\$\$DISPATCHER.IDLE)$
Dispatchers Idle % (DISPATCHERS_PERCENT_IDLE)	Percentage ratio of the time all dispatchers were idle ^{#2}	double	No	All	$(SUM(V\$\$DISPATCHER.IDLE) / (SUM(V\$\$DISPATCHER.IDLE) + SUM(V\$\$DISPATCHER.BUSY))) * 100$
Dispatchers Messages (DISPATCHERS_MESSAGES)	Total number of messages processed by all dispatchers ^{#2}	double	Yes	All	$SUM(V\$\$DISPATCHER.MESSAGES)$
Items Queued (QUEUES_QUEUED)	Total number of items currently in all queues ^{#2}	double	No	All	$SUM(V\$\$QUEUE.QUEUED)$
MTS Max Servers % (PERCENT_MTS_MAX_SERVERS)	Percentage ratio of the MTS servers to the MTS_MAX_SERVERS parameter value in the init.ora file ^{#2}	double	No	All	$(COUNT(V\$\$SHARED_SERVER) / init.ora MTS_MAX_SERVERS) * 100$
MTS Servers Highwater (SERVERS_HIGHWATER)	Maximum number of multi-thread servers (MTS) that were running at any one time since the instance started ^{#2}	long	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $V\\$\\$MTS.SERVERS_HIGHWATER$ ▪ For Oracle8i or later, which has locally managed temporary tablespaces: $V\\$\\$SHARED_SERVER_MONITOR.SERVERS_HIGHWATER$
MTS Servers Started (SERVERS_STARTED)	Total number of multi-thread servers (MTS) since the instance started (this value does not include multi-thread servers that during startup processing) ^{#2}	long	Yes	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: $V\\$\\$MTS.SERVERS_STARTED$ ▪ For Oracle8i or later, which has locally managed temporary tablespaces: $V\\$\\$SHARED_SERVER_MONITOR.SERVERS_STARTED$

MTS Servers Terminated (SERVERS_TERMINATED)	Total number of multi-thread servers (MTS) that were terminated by Oracle since the instance started#2	double	Yes	All	<ul style="list-style-type: none"> For Oracle8 or earlier, and Oracle8i or later that do not have any locally managed temporary tablespaces: V\$MTS.SERVERS_TERMINATED For Oracle8i or later, which has locally managed temporary tablespaces: V\$SHARED_SERVER_MONITOR.SERVERS_TERMINATED
Parallel Query Servers (PARALLEL_QUERY_SERVERS)	Number of parallel query servers#2	long	No	All	COUNT (V\$PQ_SLAVE)
PQS Busy (PQS_BUSY)	Length of time all parallel query servers were busy (in minutes)#2	double	Yes	All	SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL)
PQS Busy % (PQS_PERCENT_BUSY)	Percentage ratio of the time all parallel query servers were busy#2	double	No	All	(SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL) / (SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL) + SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL))) * 100
PQS CPU (PQS_CPU)	CPU time used by all parallel query servers to process SQL statements#2	double	Yes	All	SUM (V\$PQ_SLAVE.CPU_SECONDS_TOTAL)
PQS Idle (PQS_IDLE)	Length of time all parallel query servers were idle (in minutes)#2	double	Yes	All	SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL)
PQS Idle % (PQS_PERCENT_IDLE)	Percentage ratio of the time all parallel query servers were idle#2	double	No	All	(SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL) / (SUM (V\$PQ_SLAVE.IDLE_TIME_TOTAL) + SUM (V\$PQ_SLAVE.BUSY_TIME_TOTAL))) * 100
PQS Msgs Rcvd (PQS_MSGS_RCVD)	Total number of messages received by all parallel query servers#2	double	Yes	All	SUM (V\$PQ_SLAVE.MSGS_RECEIVED_TOTAL)
PQS Msgs Sent (PQS_MSGS_SENT)	Total number of messages sent by all parallel query servers#2	double	Yes	All	SUM (V\$PQ_SLAVE.MSGS_SENT_TOTAL)
PQS Sessions (PQS_SESSIONS)	Number of sessions being used by parallel	ulong	Yes	All	SUM (V\$PQ_SLAVE.SESIONS)

	query servers#2				
Queues (QUEUES)	Number of queues#2	ulong	No	All	COUNT (V\$QUEUE)
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIMT)#1	string (4)	No	All	Agent Collector
Shared Server Idle % (SHARED_SERVERS_PERCENT_IDLE)	Percentage ratio of the time during which all shared servers were idle#2	double	No	All	$(V\$\$SHARED_SERVER.IDLE / (V\$\$SHARED_SERVER.IDLE + \$SHARED_SERVER.BUSY)) * 100$
Shared Servers (SHARED_SERVERS)	Number of shared servers#2	long	No	All	COUNT (V\$SHARED_SERVER)
Shared Servers Busy (SHARED_SERVERS_BUSY)	Total length of time during which all shared servers were busy, in 1/100 seconds#2	double	Yes	All	SUM (V\$SHARED_SERVER.BUSY)
Shared Servers Busy % (SHARED_SERVERS_PERCENT_BUSY)	Percentage ratio of the time during which all shared servers were busy#2	double	No	All	$(V\$\$SHARED_SERVER.BUSY / (V\$\$SHARED_SERVER.IDLE + V\$\$SHARED_SERVER.BUSY)) * 100$
Shared Servers Idle (SHARED_SERVERS_IDLE)	Total length of time during which all shared servers were idle, in 1/100 seconds#2	double	Yes	All	SUM (V\$SHARED_SERVER.IDLE)
Shared Servers Messages (SHARED_SERVERS_MESSAGES)	Total number of messages processed by all shared servers#2	double	Yes	All	SUM (V\$SHARED_SERVER.MESSAGES)
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Total Items Queued (QUEUES_TOTAL_QUEUED)	Total number of items in all queues#2	double	Yes	All	SUM (V\$QUEUE.TOTALQ)

Total Queue Wait (QUEUES_WAIT)	Total length of time all items were queued#2	double	Yes	All	SUM(V\$QUEUE.WAIT)
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2.7.35 Open Cursor (PD_PDOC)

Function

The Open Cursor (PD_PDOC) record stores performance data indicating the status (at a specific point in time) of cursors. Agent for Oracle creates one record for each open cursor in the system. This is a multi-instance record.

Table 2.83 Open Cursor (PD_PDOC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	75	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Addrhash (ADDRHASH)

Lifetime

From the opening to the closing of the cursor

Record Size

- Fixed part: 678 bytes
- Variable part: 184 bytes

Table 2.84 Open Cursor (PD_PDOC) Fields

Open Cursor (PD_PDOC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addrhash (ADDRHASH)	Character string that identifies the SQL statement being executed	string (38)	No	All	V\$OPEN_CURSOR.ADDRESS + V\$OPEN_CURSOR.HASH_VAL UE
Program (PROGRAM)	Name of program being executed	string (48)	No	All	V\$SESSION.PROGRAM where V\$OPEN_CURSOR.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector

Record Type (INPUT_RECORD_TYPE)	Record name (always PDOC)	string (4)	No	All	Agent Collector
SID (SID)	Session ID	ulong	No	All	V\$SESSION.SID where V\$OPEN_CURSOR.SADDR = V\$SESSION.ADDR
SQL Text (SQL_TEXT)	First 60 characters of the SQL statement that is analyzed by the open cursor	string (60)	No	All	V\$OPEN_CURSOR.SQL_TEXT
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
User (USERNAME)	Oracle user name	string (30)	No	All	V\$SESSION.USERNAME where V\$OPEN_CURSOR.SID = V\$SESSION.SID

2.7.36 Options Installed (PD_PDO)

Function

The Options Installed (PD_PDO) record stores performance data indicating the status (at a specific point in time) of the software options installed at the Oracle Server. Agent for Oracle creates one record for each installation option. This is a multi-instance record.

Table 2.85 Options Installed (PD_PDO) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	70	
Log	No	
LOGIF	(Blank)	

Key Fields

Parameter (PARAMETER)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 130 bytes

Table 2.86 Options Installed (PD_PDO) Fields

Options Installed (PD_PDO)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Parameter (PARAMETER)	Option name	string(64)	No	All	V\$OPTION.PARAMETER
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDO)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

Value (VALUE)	Whether or not the option has been specified. Valid values are TRUE (specified) and FALSE (not specified).	string(64)	No	All	V\$OPTION.VALUE
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2.7.37 Parallel Query Server (PD_PDPQ)

Function

The Parallel Query Server (PD_PDPQ) record stores performance data indicating the status (at a specific point in time) of parallel query servers. Agent for Oracle creates one record for each parallel query server of an instance. This is a multi-instance record.

Table 2.87 Parallel Query Server (PD_PDPQ) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	55	
Log	No	
LOGIF	(Blank)	

Key Fields

Slave Name (SLAVE_NAME)

Lifetime

From the start to the end of a Parallel Execution Server

Record Size

- Fixed part: 678 bytes
- Variable part: 90 bytes

Table 2.88 Parallel Query Server (PD_PDPQ) Fields

Parallel Query Server (PD_PDPQ)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Busy % (PERCENT_BUSY)	Percentage ratio of the time the query server was busy	double	No	All	$(V\$PQ_SLAVE.BUSY_TIME_TOTAL / (V\$PQ_SLAVE.IDLE_TIME_TOTAL + V\$PQ_SLAVE.BUSY_TIME_TOTAL)) * 100$
Current Busy Time (BUSY_TIME_CUR)	Length of time the query server was busy during the SQL statement processing in the session that was active during data collection	ulong	No	All	V\$PQ_SLAVE.BUSY_TIME_CUR

Current CPU Secs (CPU_SECS_CUR)	CPU time used in the session that was active during data collection	ulong	No	All	V\$PQ_SLAVE.CPU_SECS_CUR
Current Idle Time (IDLE_TIME_CUR)	Length of time the query server was idle during SQL statement processing in the session that was active during data collection	ulong	No	All	V\$PQ_SLAVE.IDLE_TIME_CUR
Current Msgs Rcvd (MSGS_RCVD_CUR)	Number of messages received during SQL statement processing by the session that was active during data collection	ulong	No	All	V\$PQ_SLAVE.MSGS_RCVD_CUR
Current Msgs Sent (MSGS_SENT_CUR)	Number of messages sent during SQL statement processing by the session that was active during data collection	ulong	No	All	V\$PQ_SLAVE.MSGS_SENT_CUR
Idle % (PERCENT_IDLE)	Percentage ratio of the time the query server was idle	double	No	All	(V\$PQ_SLAVE.IDLE_TIME_TOTAL / (V\$PQ_SLAVE.IDLE_TIME_TOTAL + V\$PQ_SLAVE.BUSY_TIME_TOTAL)) * 100
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDPQ)	string(4)	No	All	Agent Collector
Sessions (SESSIONS)	Number of sessions in use by the parallel query server	ulong	No	All	V\$PQ_SLAVE.SESSIONS
Slave Name (SLAVE_NAME)	Name of the parallel query server	string(4)	No	All	V\$PQ_SLAVE.SLAVE_NAME
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Status of the parallel query server during data collection. Valid values are BUSY	string(4)	No	All	V\$PQ_SLAVE.STATUS

	and IDLE.				
Total Busy Time (BUSY_TIME_TOTAL)	Total length of time the query server was active during the interval	double	No	All	V\$PQ_SLAVE.BUSY_TIME_TOTAL
Total CPU Secs (CPU_SECS_TOTAL)	Total CPU time used by the query server to process SQL statements during the interval	double	No	All	V\$PQ_SLAVE.CPU_SECS_TOTAL
Total Idle Time (IDLE_TIME_TOTAL)	Total length of time the query server was idle during the interval	double	No	All	V\$PQ_SLAVE.IDLE_TIME_TOTAL
Total Msgs Rcvd (MSGS_RCVD_TOTAL)	Total number of messages received by the query server during the interval	double	No	All	V\$PQ_SLAVE.MSGS_RCVD_TOTAL
Total Msgs Sent (MSGS_SENT_TOTAL)	Total number of messages sent by the query server during the interval	double	No	All	V\$PQ_SLAVE.MSGS_SENT_TOTAL

2.7.38 Parallel Query Server Interval (PI_PIPQ)

Function

The Parallel Query Server Interval (PI_PIPQ) record stores performance data, taken at specific intervals, about parallel query servers. Agent for Oracle creates one record for each parallel query server of an instance. This is a multi-instance record.

Table 2.89 Parallel Query Server Interval (PI_PIPQ) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	45	
Log	No	
LOGIF	(Blank)	

Key Fields

Slave Name (SLAVE_NAME)

Lifetime

From the start to the end of a Parallel Execution Server

Record Size

- Fixed part: 678 bytes
- Variable part: 246 bytes

Table 2.90 Parallel Query Server Interval (PI_PIPQ) Fields

Parallel Query Server Interval (PI_PIPQ)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Busy % (PERCENT_BUSY)	Percentage ratio of the time the query server was busy ^{#2}	double	No	All	(V\$PQ_SLAVE.B USY_TIME_TOTA L / (V\$PQ_SLAVE.I DLE_TIME_TOTA L + V\$PQ_SLAVE.BU SY_TIME_TOTAL) * 100
Current Busy Time (BUSY_TIME_CUR)	Length of time the query server was busy during the SQL statement processing in the session that was active during data	ulong	No	All	V\$PQ_SLAVE.BU SY_TIME_CUR

	collection#2				
Current CPU Secs (CPU_SECS_CUR)	CPU time used in the session that was active during data collection#2	ulong	No	All	V\$PQ_SLAVE.CPU_SECS_CUR
Current Idle Time (IDLE_TIME_CUR)	Length of time the query server was idle during SQL statement processing in the session that was active during data collection#2	ulong	No	All	V\$PQ_SLAVE.IDLE_TIME_CUR
Current Msgs Rcvd (MSGS_RCVD_CUR)	Number of messages received during SQL statement processing by the session that was active during data collection #2	ulong	No	All	V\$PQ_SLAVE.MSGS_RCVD_CUR
Current Msgs Sent (MSGS_SENT_CUR)	Number of messages sent during SQL statement processing by the session that was active during data collection #2	ulong	No	All	V\$PQ_SLAVE.MSGS_SENT_CUR
Idle % (PERCENT_IDLE)	Percentage ratio of the time the query server was idle#2	double	No	All	(V\$PQ_SLAVE.IDLE_TIME_TOTAL / (V\$PQ_SLAVE.IDLE_TIME_TOTAL + V\$PQ_SLAVE.BUSY_TIME_TOTAL)) * 100
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIPQ)#1	string(4)	No	All	Agent Collector
Sessions (SESSIONS)	Number of sessions in use by the parallel query server#2	ulong	Yes	All	V\$PQ_SLAVE.SESIONS
Slave Name (SLAVE_NAME)	Name of the parallel query server#1	string(4)	No	All	V\$PQ_SLAVE.SLAVE_NAME
Start Time (START_TIME)	Collection start time for the performance data stored in the	time_t	No	All	Agent Collector

	record#1				
Status (STATUS)	Status of the parallel query server during data collection. Valid values are BUSY and IDLE.#1	string(4)	No	All	V\$PQ_SLAVE.STATUS
Total Busy Time (BUSY_TIME_TOTAL)	Total length of time the query server was active during the interval#2	double	Yes	All	V\$PQ_SLAVE.BUSY_TIME_TOTAL
Total CPU Secs (CPU_SECS_TOTAL)	Total CPU time used by the query server to process SQL statements during the interval#2	double	Yes	All	V\$PQ_SLAVE.CPU_SECS_TOTAL
Total Idle Time (IDLE_TIME_TOTAL)	Total length of time the query server was idle during the interval#2	double	Yes	All	V\$PQ_SLAVE.IDLE_TIME_TOTAL
Total Msgs Rcvd (MSGS_RCVD_TOTAL)	Total number of messages received by the query server during the interval#2	double	Yes	All	V\$PQ_SLAVE.MSGS_RCVD_TOTAL
Total Msgs Sent (MSGS_SENT_TOTAL)	Total number of messages sent by the query server during the interval#2	double	Yes	All	V\$PQ_SLAVE.MSGS_SENT_TOTAL

2.7.39 Parallel Query Statistics (PD_PDPS)

Function

The Parallel Query Statistics (PD_PDPS) record stores performance data indicating the status (at a specific point in time) of parallel query options. Agent for Oracle creates one record for each statistical value. To collect this record, parallel query servers must be running.

Table 2.91 Parallel Query Statistics (PD_PDPS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	90	
Log	No	
LOGIF	(Blank)	

Key Fields

Statistic (*STATISTIC*)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 39 bytes

Table 2.92 Parallel Query Statistics (PD_PDPS) Fields

Parallel Query Statistics (PD_PDPS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Record Time (<i>RECORD_TIME</i>)	Collection termination time for the performance data stored in the record	<i>time_t</i>	No	All	Agent Collector
Record Type (<i>INPUT_RECORD_TYPE</i>)	Record name (always PDPS)	<i>string(4)</i>	No	All	Agent Collector
Start Time (<i>START_TIME</i>)	Collection start time for the performance data stored in the record	<i>time_t</i>	No	All	Agent Collector
Statistic (<i>STATISTIC</i>)	Name of the statistical information	<i>string(30)</i>	No	All	<i>V\$PQ_SYSSTAT.NAME</i>
Value (<i>VALUE</i>)	Statistical value	<i>double</i>	No	All	<i>V\$PQ_SYSSTAT.VALUE</i>

2.7.40 Parameter Values (PD_PDP)

Function

The Parameter Values (PD_PDP) record stores performance data indicating the status (at a specific point in time) of current parameter values. Agent for Oracle creates one record for each parameter. This is a multi-instance record.

Table 2.93 Parameter Values (PD_PDP) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	85	
Log	No	
LOGIF	(Blank)	

Key Fields

Parameter Name (NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 588 bytes

Table 2.94 Parameter Values (PD_PDP) Fields

Parameter Values (PD_PDP)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Is Default (IS_DEFAULT)	Whether or not the value is the default. Valid values are TRUE and FALSE.	string(9)	No	All	V\$PARAMETER.ISDEFAULT
Parameter Name (NAME)	Parameter name	string(64)	No	All	V\$PARAMETER.NAME
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDP)	string(4)	No	All	Agent Collector

Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Value (VALUE)	Parameter value	string(512)	No	All	V\$PARAMETER.VALUE

2.7.41 Process Detail (PD_PDOP)

Function

The Process Detail (PD_PDOP) record stores performance data indicating the status (at a specific point in time) of processes. Agent for Oracle creates one record for each process in an instance. This is a multi-instance record.

Table 2.95 Process Detail (PD_PDOP) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	80	
Log	No	
LOGIF	(Blank)	

Key Fields

Oracle PID (`PID`)

Lifetime

From the start to the end of a process

Record Size

- Fixed part: 678 bytes
- Variable part: 109 bytes

Table 2.96 Process Detail (PD_PDOP) Fields

Process Detail (PD_PDOP)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Background (<code>BACKGROUND</code>)	Whether or not this is a background process. Valid values are <code>Y</code> (background process) and <code>N</code> (normal process).	string (1)	No	All	<code>V\$PROCESS.BACKGROUND</code>
Latchspin (<code>LATCHSPIN</code>)	Address of the latch in spin status (if there is no such latch, the value is <code>null</code>)	string (8)	No	All	<code>V\$PROCESS.LATCHSPIN</code>
Latchwait (<code>LATCHWAIT</code>)	Address of the latch in wait status (if there is no such latch, the value is <code>null</code>)	string (8)	No	All	<code>V\$PROCESS.LATCHWAIT</code>
Oracle PID (<code>PID</code>)	Oracle process ID	long	No	All	<code>V\$PROCESS.PID</code>

Program (PROGRAM)	Name of program being executed	string (48)	No	All	V\$PROCESS.PROGRAM
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDOP)	string (4)	No	All	Agent Collector
SPID (SPID)	OS's process ID	string (9)	No	All	V\$PROCESS.SPID
Serial # (SERIAL_NUM)	Process serial number	long	No	All	V\$PROCESS.SERIAL#
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Terminal (TERMINAL)	OS's terminal ID	string (10)	No	All	V\$PROCESS.TERMINAL
User (USERNAME)	OS's process user name (for a 2-task user that accesses via a network, -T is added to the user name)	string (10)	No	All	V\$PROCESS.USERNAME

2.7.42 Queue Statistics (PD_PDQU)

Function

The Queue Statistics (PD_PDQU) record stores performance data indicating the status (at a specific point in time) of queues. Agent for Oracle creates one record for each queue in an instance. This is a multi-instance record.

Table 2.97 Queue Statistics (PD_PDQU) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	95	
Log	No	
LOGIF	(Blank)	

Key Fields

- Oracle PID (PID)
- Type (TYPE)

Lifetime

From the start to the end of a process that has a queue

Record Size

- Fixed part: 678 bytes
- Variable part: 47 bytes

Table 2.98 Queue Statistics (PD_PDQU) Fields

Queue Statistics (PD_PDQU)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Wait (AVERAGE_WAIT)	Average wait time per item	double	No	All	V\$QUEUE.WAIT / V\$QUEUE.TOTALQ
Oracle PID (PID)	Queue's Oracle process ID	long	No	All	V\$PROCESS.PID where V\$QUEUE.PADDR = V\$PROCESS.ADDR
Queued (QUEUED)	Number of items in the queue	double	No	All	V\$QUEUE.QUEUED
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector

Record Type (INPUT_RECORD_TYPE)	Record name (always PDQU)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Total Queued (TOTAL_QUEUED)	Total number of items in the queue	double	No	All	V\$QUEUE.TOTALQ
Type (TYPE)	Type of queue. Valid values are COMMON (process for each server), DISPATCHER, and OUTBOUND (in use by remote server).	string(10)	No	All	V\$QUEUE.TYPE
Wait (WAIT)	Total length of time all items were queued	double	No	All	V\$QUEUE.WAIT

2.7.43 Resource Limit (PD_PDRL)

Function

The Resource Limit (PD_PDRL) record stores performance data indicating the usage (at a specific point in time) of system global resources. Agent for Oracle creates one record for each system resource. This is a multi-instance record.

Table 2.99 Resource Limit (PD_PDRL) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	25	
Log	No	
LOGIF	(Blank)	

Key Fields

Resource Name (RESOURCE_NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 77 bytes

Table 2.100 Resource Limit (PD_PDRL) Fields

Resource Limit (PD_PDRL)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Current Utilization (CURRENT_UTILIZATION)	Number of locks, resources, or processes currently in use	double	No	All	V\$RESOURCE_LIMIT.CURRENT_UTILIZATION
Initial Allocation (INITIAL_ALLOCATION)	Initial allocation (value specified in initialization parameter file)	string (10)	No	All	V\$RESOURCE_LIMIT.INITIAL_ALLOCATION
Limit Value (LIMIT_VALUE)	Limit value for locks and resources (the value of this field can be greater than the initial allocation value; in the case of unlimited allocation, the value of this field is UNLIMITED)	string (10)	No	All	V\$RESOURCE_LIMIT.LIMIT_VALUE

Max Utilization (MAX_UTILIZATION)	Maximum amount of resources used since the last instance started	double	No	All	V\$RESOURCE_LIMIT.M AX_UTILIZATION
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the RECORD	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDRL)	string (4)	No	All	Agent Collector
Resource Name (RESOURCE_NAME)	Resource name	string (30)	No	All	V\$RESOURCE_LIMIT.R ESOURCE_NAME
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Utilization % (UTILIZATION_PERCENT)	Percentage ratio of current usage to maximum usage	double	No	All	CURRENT_UTILIZATIO N / MAX_UTILIZATION * 100

2.7.44 Rollback Segment (PD_PDRS)

Function

The Rollback Segment (PD_PDRS) record stores performance data indicating the status (at a specific point in time) of each rollback segment in a database. Agent for Oracle creates one record for each rollback segment. This is a multi-instance record.

Table 2.101 Rollback Segment (PD_PDRS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	30	
Log	No	
LOGIF	(Blank)	

Key Fields

USN (USN)

Lifetime

From the creation to the deletion of a rollback segment

Record Size

- Fixed part: 678 bytes
- Variable part: 190 bytes

Table 2.102 Rollback Segment (PD_PDRS) Fields

Rollback Segment (PD_PDRS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Active (AVG_ACTIVE)	Average size of an active extent that has uncommitted transaction data during data collection	double	No	All	V\$ROLLSTAT.AVEACTIVE
Avg Shrink (AVG_SHRINK)	Total size of released extents divided by the number of shrinks	double	No	All	V\$ROLLSTAT.AVESHRI NK
Extends (EXTENDS)	Number of times the rollback segment was extended to obtain new extents	double	No	All	V\$ROLLSTAT.EXTENDS
Extents (EXTENTS)	Number of extents in the rollback segment	ulong	No	All	V\$ROLLSTAT.EXTENTS

Gets (GETS)	Number of times header was obtained	double	No	All	V\$ROLLSTAT.GETS
Hit % (HIT_PERCENTAGE)	Rate at which a segment header was obtained without waiting	double	No	All	$(V$ROLLSTAT.GETS - V$ROLLSTAT.WAITS) / V$ROLLSTAT.GETS * 100$
HWM Size (HWM_SIZE)	Maximum size of rollback segment	double	No	All	V\$ROLLSTAT.HWM_SIZE
Mbytes (BYTES)	Size of rollback segment in megabytes	double	No	All	VROLLSTAT.RSSIZE / (1024 * 1024)$
Optimal Size (OPT_SIZE)	Optimum size of rollback segment	double	No	All	V\$ROLLSTAT.OPT_SIZE
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDRS)	string(4)	No	All	Agent Collector
Segment Name (NAME)	Name of the rollback segment	string(30)	No	All	V\$ROLLNAME.NAME
Shrinks (SHRINKS)	Number of times the rollback segment shrank by deleting at least one additional extent	double	No	All	V\$ROLLSTAT.SHRINKS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Status. Valid values are ONLINE (segment is online) and PENDINGOFFLINE (segment is offline, but several active transactions are used in the rollback segment; segment is placed offline when transactions are completed).	string(15)	No	All	V\$ROLLSTAT.STATUS
Tablespace Name (TABLESPACE_NAME)	Name of tablespace that contains the segment	string(30)	No	All	DBA_ROLLBACK_SEGS.ABLES- SPACE_NAME
Transactions (TRANSACTIONS)	Number of active transactions	long	No	All	V\$ROLLSTAT.XACTS
USN (USN)	Rollback segment number	double	No	All	V\$ROLLSTAT.USN
Waits	Number of header waits	double	No	All	V\$ROLLSTAT.WAITS

(WAITS)					
Wraps (WRAPS)	Number of times rollback segment was wrapped from one extent to another	double	No	All	V\$ROLLSTAT.WRAPS
Writes (WRITES)	Number of bytes written in the rollback segment	double	No	All	V\$ROLLSTAT.WRITES

2.7.45 Rollback Segment Interval (PI_PIRS)

Function

The Rollback Segment Interval (PI_PIRS) record stores performance data, taken at specific intervals, about each rollback segment in a database. Agent for Oracle creates one record for each rollback segment. This is a multi-instance record.

Table 2.103 Rollback Segment Interval (PI_PIRS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	20	
Log	No	
LOGIF	(Blank)	

Key Fields

USN (USN)

Lifetime

From the creation to the deletion of a rollback segment

Record Size

- Fixed part: 678 bytes
- Variable part: 426 bytes

Table 2.104 Rollback Segment Interval (PI_PIRS) Fields

Rollback Segment Interval (PI_PIRS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Active (AVG_ACTIVE)	Average size of an active extent that has uncommitted transaction data during data collection#2	double	No	All	V\$ROLLSTAT.AVEACTIVE
Avg Shrink (AVG_SHRINK)	Total size of released extents divided by the number of shrinks #2	double	No	All	V\$ROLLSTAT.AVESHRIK
Extends (EXTENDS)	Number of times the rollback segment was extended to obtain new extents#2	double	Yes	All	V\$ROLLSTAT.EXTENDS
Extents (EXTENTS)	Number of extents in the rollback segment#2	ulong	No	All	V\$ROLLSTAT.EXTENTS

Gets (GETS)	Number of times header was obtained#2	double	Yes	All	V\$ROLLSTAT.GETS
Hit % (HIT_PERCENTAGE)	Rate at which a segment header was obtained without waiting#2	double	No	All	((V\$ROLLSTAT.GETS - V\$ROLLSTAT.WAITS) / V\$ROLLSTAT.GETS) * 100
HWM Size (HWM_SIZE)	Maximum size of rollback segment#2	double	No	All	V\$ROLLSTAT.HWMSIZE
Mbytes (BYTES)	Size of rollback segment in megabytes#2	double	No	All	V\$ROLLSTAT.RSSIZE / (1024 * 1024)
Optimal Size (OPT_SIZE)	Optimum size of rollback segment#2	double	No	All	V\$ROLLSTAT.OPTSIZE
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIRS)#1	string(4)	No	All	Agent Collector
Segment Name (NAME)	Name of the rollback segment#1	string(30)	No	All	V\$ROLLNAME.NAME
Shrinks (SHRINKS)	Number of times the rollback segment shrank by deleting at least one additional extent#2	double	Yes	All	V\$ROLLSTAT.SHRINKS
Size Change (SIZE_CHANGE)	Change to the size of rollback segment#2	double	No	All	V\$ROLLSTAT.RSSIZE
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Status (STATUS)	Status.Valid values are ONLINE (segment is online) and PENDINGOFFLINE (segment is offline, but several active transactions are used in the rollback segment; segment is placed offline when transactions are completed).#1	string(15)	No	All	V\$ROLLSTAT.STATUS
Tablespace Name (TABLESPACE_NAME)	Name of tablespace that contains the segment#1	string(30)	No	All	DBA_ROLLBACK_SEGS. TABLESPACE_NAME
Transactions (TRANSACTIONS)	Number of active transactions#2	long	No	All	V\$ROLLSTAT.XACTS

USN (USN)	Rollback segment number ^{#1}	double	No	All	V\$ROLLSTAT.USN
Waits (WAITS)	Number of header waits ^{#2}	double	Yes	All	V\$ROLLSTAT.WAITS
Wraps (WRAPS)	Number of times rollback segment was wrapped from one extent to another ^{#2}	double	Yes	All	V\$ROLLSTAT.WRAPS
Writes (WRITES)	Number of bytes written in the rollback segment ^{#2}	double	Yes	All	V\$ROLLSTAT.WRITES

2.7.46 Segment Detail (PD_PDSM)

Function

The Segment Detail (PD_PDSM) record stores performance data indicating the status (at a specific point in time) of database segments. Agent for Oracle creates one record for each segment. This is a multi-instance record.

Table 2.105 Segment Detail (PD_PDSM) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	120	
Log	No	
LOGIF	(Blank)	

Key Fields

- Segment Name (SEGMENT_NAME)
- Tablespace Name (TABLESPACE_NAME)

Lifetime

From the creation to the deletion of a segment

Record Size

- Fixed part: 678 bytes
- Variable part: 231 bytes

Table 2.106 Segment Detail (PD_PDSM) Fields

Segment Detail (PD_PDSM)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Blocks (BLOCKS)	Segment size in Oracle blocks	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: DBA_SEGMENTS.BLOCKS ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: DBA_SEGMENTS.BLOCKS ▪ For locally managed temporary tablespaces of Oracle8i or later: V\$SORT_SEGMENT.TOTAL_BLOCKS

Bytes (BYTES)	Segment size in bytes	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: DBA_SEGMENTS.BYTES ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: DBA_SEGMENTS.BYTES ▪ For locally managed temporary tablespaces of Oracle8i or later: DBA_TEMP_FILES.BYTES
Extents (EXTENTS)	Number of extents allocated to this segment	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: DBA_SEGMENTS.EXTENTS ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: DBA_SEGMENTS.EXTENTS ▪ For locally managed temporary tablespaces of Oracle8i or later: V\$SORT_SEGMENT.TOTAL_EXTENTS
Free list Groups (FREELIST_GROUPS)	Number of free list groups allocated to the segment. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	ulong	No	All	DBA_SEGMENTS.FREELIST_GROUPS
Free lists (FREELISTS)	Number of process free lists allocated to the segment. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	ulong	No	All	DBA_SEGMENTS.FREELISTS
Header Block (HEADER_BLOCK)	Block ID including the segment header. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	ulong	No	All	DBA_SEGMENTS.HEADER_BLOCK

Header File (HEADER_FILE)	File ID including the segment header. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	ushort	No	All	DBA_SEGMENTS.HEADER_FILE
Increase % (PCT_INCREASE)	Percentage ratio of the size to be increased by the next extent that is allocated. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	short	No	All	DBA_SEGMENTS.PCT_INCREASE
Initial Extent (INITIAL_EXTENT)	Size of the initial extent for the segment in bytes. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	double	No	All	DBA_SEGMENTS.INITIAL_EXTENT
Max Extents (MAX_EXTENTS)	Maximum number of extents permitted for the segment. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	ulong	No	All	DBA_SEGMENTS.MAX_EXTENT
Max Extents % (PERCENT_MAX_EXTENTS)	Percentage ratio of the current extents allocated to the maximum number of extents permitted for the segment. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	double	No	All	(DBA_SEGMENTS.EXTENTS / DBA_SEGMENTS.MAX_EXTENT) * 100

Min Extents (MIN_EXTENTS)	Minimum number of extents permitted for the segment	ulong	No	All	DBA_SEGMENTS.MIN_EXTENT
Next Alloc Fails (NEXT_ALLOC_FAILS)	Correct values cannot be collected in this field. Failure of the next extent allocation. If it fails, the value of this field is 1. Otherwise, the value is 0. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	short	No	All	DBA_SEGMENTS.NEXT_EXTENT > MAX(fet\$.length) * DB_BLOCK_SIZE
Next Extent (NEXT_EXTENT)	Size of the next extent for the segment in bytes	double	No	All	DBA_SEGMENTS.NEXT_EXTENT
Overextended (OVEREXTENDED)	Correct values cannot be collected in this field. If the number of extents is greater than the specified value (initial value is 5), the value of this field is 1; Otherwise, the value of this field is 0.	short	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: DBA_SEGMENTS.EXTENTS > 5 ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: DBA_SEGMENTS.EXTENTS > 5 ▪ For locally managed temporary tablespaces of Oracle8i or later: V\$SORT_SEGMENT.TOTAL_EXTENTS > 5
Owner (OWNER)	Segment owner's user name. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	string (30)	No	All	DBA_SEGMENTS.OWNER
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDSM)	string (4)	No	All	Agent Collector

Segment Name (SEGMENT_NAME)	Segment name. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	string (81)	No	All	DBA_SEGMENTS.SEGMENT_NAME
Segment Type (SEGMENT_TYPE)	Segment type. Valid values are CACHE, CLUSTER, DEFERRED ROLLBACK, INDEX, ROLLBACK, TABLE, and TEMPORARY. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	string (18)	No	All	DBA_SEGMENTS.SEGMENT_TYPE
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Tablespace Name (TABLESPACE_NAME)	Name of tablespace that contains the segment	string (30)	No	All	DBA_SEGMENTS.TABLESPACE_NAME

2.7.47 Server Status (PD_STAT)

Function

The Server Status (PD_STAT) record stores performance data indicating the status (at a specific point in time) of the Oracle database.

Table 2.107 Server Status (PD_STAT) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 686 bytes
- Variable part: 0 bytes

Table 2.108 Server Status (PD_STAT) Fields

Server Status (PD_STAT)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Availability (AVAILABILITY)	Availability status; valid value is 0 (inactive) or 1 (active)	ulong	No	All	Agent Collector
Change Time (CHANGE_TIME)	Last time Availability was changed	time_t	No	All	Agent Collector
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always STAT)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

2.7.48 Session Detail (PD_PDS)

Function

The Session Detail (PD_PDS) record stores the performance data indicating the status (at a specific point in time) of sessions. Agent for Oracle creates one record for each session in an instance. This is a multi-instance record.

If you cannot view the performance data in this record, create Oracle's static data dictionary view `DBA_WAITERS`. To create the static data dictionary view `DBA_WAITERS`, you must execute the `CATBLOCK.SQL` script that is provided by Oracle.

Table 2.109 Session Detail (PD_PDS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	100	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (`SID`)
- Serial # (`SERIAL_NUM`)

Lifetime

From the start to the end of a session

Record Size

- Fixed part: 678 bytes
- Variable part: 682 bytes

Table 2.110 Session Detail (PD_PDS) Fields

Session Detail (PD_PDS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Action (ACTION)	Name of the action that is specified by calling the DBMS_APPLICATION_ INFO.SET_ACTION procedure during data collection	string (32)	No	All	V\$SESSION.ACTION
Addrhash (ADDRHASH)	Character string that identifies the SQL statement being executed	string (38)	No	All	V\$SESSION.SQL_ADDRE SS + V\$SESSION.SQL_HASH_ VALUE
Auditing SID (AUDSID)	Auditing session ID. The value of this field is -1 when Oracle Database 10g is being monitored or when the value of the User field is SYS.	ulong	No	All	V\$SESSION.AUDSID
Avg Wait (AVERAGE_WAIT)	Average time of all events the session is waiting for (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	ulong	No	All	AVG(V\$SESSION_EVENT .AVERAGE_WAIT)
Avg Wait String (AVERAGE_WAIT_STRING)	Average time (character string) of all events the session is waiting for (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	string (20)	No	All	AVG(V\$SESSION_EVENT .AVERAGE_WAIT)
Blocking Locks (BLOCKING_LOCKS)	Number of locks blocking another lock	double	No	All	COUNT(V\$LOCK) where V\$LOCK.BLOCK > 0
Client Info (CLIENT_INFO)	Information specified by calling the DBMS_APPLICATION_ INFO.SET_CLIE NT_INFO procedure	string (64)	No	All	V\$SESSION.CLIENT_IN FO
Client PID (PROCESS)	OS's client ID	string (9)	No	All	V\$SESSION.PROCESS
Command (COMMAND)	Command being executed	string (32)	No	All	V\$SESSION.COMMAND
Fixed Table Sequence	Value to be increased each time the session	double	No	All	V\$SESSION.FIXED_TAB

(FIXED_TABLE_SEQUENCE)	completes a call to the database				LE_SEQUENCE
Locks Held (LOCKS_HELD)	Number of locks held by the session during data collection	double	No	All	COUNT(V\$LOCKS) where V\$LOCK.LMODE is NOT NULL
Locks Requested (LOCKS_REQUESTED)	Number of locks requested but the session was not holding	double	No	All	COUNT(V\$LOCKS) where V\$LOCK.LMODE is NULL
Lockwait (LOCKWAIT)	Address of the lock the session is waiting for (if there is no such lock, the value is null)	string (8)	No	All	V\$SESSION.LOCKWAIT
Logon Seconds (LOGON_SECONDS)	Number of seconds since logon	ulong	No	All	V\$SESSION.LOGON_TIME
Logon Time (LOGON_TIME)	Session connection time	string (20)	No	All	V\$SESSION.LOGON_TIME
Machine (MACHINE)	OS's machine name	string (64)	No	All	V\$SESSION.MACHINE
Module (MODULE)	Name of the module being executed that is specified by calling the DBMS_APPLICATION_INFO.SET_MODULE during data collection	string (48)	No	All	V\$SESSION.MODULE
Open Cursors (OPEN_CURSORS)	Number of open cursors	ulong	No	All	COUNT(V\$OPEN_CURSORS)
Oracle PID (PID)	Oracle process ID	long	No	All	V\$PROCESS.PID where V\$SESSION.PADDR = V\$PROCESS.ADDR
Oracle Server (SERVER)	Oracle server type. Valid values are DEDICATED, NONE, PSEUDO, and SHARED	string (9)	No	All	V\$SESSION.SERVER
OS User (OSUSER)	OS's client user name	string (30)	No	All	V\$SESSION.OSUSER
Program (PROGRAM)	OS's program name	string (64)	No	All	V\$SESSION.PROGRAM
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDS)	string (4)	No	All	Agent Collector
Schema # (SCHEMA_NUM)	Schema user ID	long	No	All	V\$SESSION.SCHEMA#
Schema Name (SCHEMANAME)	Schema user name	string (30)	No	All	V\$SESSION.SCHEMANAME

Serial # (SERIAL_NUM)	Session serial number that identifies the session object. This guarantees that a session-level command is applied to the correct session object, even when one session ends and another session with the same session ID starts.	ulong	No	All	V\$SESSION.SERIAL#
Session Events (SESSION_EVENTS)	Number of events placed in wait status by the session	short	No	All	COUNT(V\$SESSION_EVENT)
Session Waits (SESSION_WAITS)	Number of waits caused by the session	short	No	All	COUNT(V\$SESSION_WAIT)
Sessions Blocked (SESSIONS_BLOCKED)	Number of sessions blocked by the session	ulong	No	All	COUNT(DBA_WAITERS)
SID (SID)	Session ID	ulong	No	All	V\$SESSION.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Session status. Valid values are ACTIVE, INACTIVE, KILLED, CACHED, and SNIPED.	string (8)	No	All	V\$SESSION.STATUS
Table Accesses (TABLE_ACSESSES)	Number of table accesses	double	No	All	COUNT(V\$ACCESS)
Terminal (TERMINAL)	OS's terminal name	string (16)	No	All	V\$SESSION.TERMINAL
Time Waited (TIME_WAITED)	Total length of time the session waited for ALL events (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	ulong	No	All	SUM(V\$SESSION_EVENT.TIME_WAITED)
Time Waited String (TIME_WAITED_STRING)	Total length of time (character string) the session waited for ALL events (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	string (20)	No	All	SUM(V\$SESSION_EVENT.TIME_WAITED)
Total Timeouts (TOTAL_TIMEOUTS)	Total number of timeouts for the session events	ulong	No	All	SUM(V\$SESSION_EVENT.TOTAL_TIMEOUTS)
Total Waits	Number of waits for all	double	No	All	SUM(V\$SESSION_EVENT

(TOTAL_WAITS)	events of the session				.TOTAL_WAITS)
Transaction Address (TRANSACTION_ADDRESS)	Address of the transaction state object	string (8)	No	All	V\$SESSION.TADDR
Transactions (TRANSACTIONS)	Number of active transactions	ushort	No	All	COUNT(V\$TRANSACTION)
Type (TYPE)	Session type	string (10)	No	All	V\$SESSION.TYPE
User (USERNAME)	Oracle user name	string (30)	No	All	V\$SESSION.USERNAME
User # (USER_NUM)	Oracle user ID	long	No	All	V\$SESSION.USER#

2.7.49 Session Event (PD_PDEV)

Function

The Session Event (PD_PDEV) record stores performance data indicating the status (at a specific point in time) of session events. Agent for Oracle creates one record for each event the session waits for. This is a multi-instance record.

Table 2.111 Session Event (PD_PDEV) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	45	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Event (EVENT)

Lifetime

From the start to the end of a session event

Record Size

- Fixed part: 678 bytes
- Variable part: 239 bytes

Table 2.112 Session Event (PD_PDEV) Fields

Session Event (PD_PDEV)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Wait (AVERAGE_WAIT)	Average time of all events the session is waiting for (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	double	No	All	V\$SESSION_EVENT .AVERAGE_WAIT
Avg Wait String (AVERAGE_WAIT_STRING)	Average time (character string) of all events the session is waiting for (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	string(21)	No	All	V\$SESSION_EVENT .AVERAGE_WAIT
Event (EVENT)	Name of the event the session is waiting for	string(64)	No	All	V\$SESSION_EVENT .EVENT
Program (PROGRAM)	Name of program being executed	string(64)	No	All	V\$SESSION.PROGRAM where V\$SESSION_EVENT .SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDEV)	string(4)	No	All	Agent Collector
SID (SID)	Session ID	short	No	All	V\$SESSION_EVENT .SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Time Waited (TIME_WAITED)	Total time the session was waiting for events (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	double	No	All	V\$SESSION_EVENT .TIME_WAITED
Time Waited String (TIME_WAITED_STRING)	Total time the session was waiting for events (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	string(21)	No	All	V\$SESSION_EVENT .TIME_WAITED

	file)				
Total Timeouts (TOTAL_TIMEOUTS)	Total number of timeouts for the session events	double	No	All	V\$SESSION_EVENT .TOTAL_TIMEOUTS
Total Waits (TOTAL_WAITS)	Session's total number of waits for events	double	No	All	V\$SESSION_EVENT .TOTAL_WAITS
User (USERNAME)	Oracle user name#1	string(30)	No	All	V\$SESSION.USERNAME where V\$SESSION_EVENT .SID = V\$SESSION.SID

2.7.50 Session Event Interval (PI_PIEV)

Function

The Session Event Interval (PI_PIEV) record stores performance data, taken at specific intervals, about session events. Agent for Oracle creates one record for each event the session waits for. This is a multi-instance record.

Table 2.113 Session Event Interval (PI_PIEV) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	45	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Event (EVENT)

Lifetime

From the start to the end of a session event

Record Size

- Fixed part: 678 bytes
- Variable part: 289 bytes

Table 2.114 Session Event Interval (PI_PIEV) Fields

Session Event Interval (PI_PIEV)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Wait (AVERAGE_WAIT)	Average time of all events the session is waiting for (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file) ^{#2}	double	No	All	V\$SESSION_EVENT.AVERAGE_WAIT
Avg Wait String (AVERAGE_WAIT_STRING)	Average time (character string) of all events the session is waiting for (to collect the	string (21)	No	All	V\$SESSION_EVENT.AVERAGE_WAIT

	value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)#1				
Event (EVENT)	Name of the event the session is waiting for#1	string (64)	No	All	V\$SESSION_EVENT.EVENT
Program (PROGRAM)	Name of program being executed#1	string (48)	No	All	V\$SESSION.PROGRAM where V\$SESSION_EVENT.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIEV)#1	string (4)	No	All	Agent Collector
SID (SID)	Session ID#1	ulong	No	All	V\$SESSION_EVENT.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Time Waited (TIME_WAITED)	Total time the session was waiting for event (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)#2	double	Yes	All	V\$SESSION_EVENT.TIME_WAITED
Time Waited String (TIME_WAITED_STRING)	Total time the session was waiting for event (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)#1	string (21)	No	All	V\$SESSION_EVENT.TIME_WAITED
Total Timeouts (TOTAL_TIMEOUTS)	Total number of timeouts for the session event#2	double	Yes	All	V\$SESSION_EVENT.TOTAL_TIMEOUTS
Total Waits (TOTAL_WAITS)	Session's total number of waits for the events#2	double	Yes	All	V\$SESSION_EVENT.TOTAL_WAITS

User (USERNAME)	Oracle user name#1	string (30)	No	All	V\$SESSION.USERNAME where V\$SESSION_EVENT.SI D = V\$SESSION.SID
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2.7.51 Session I/O Interval (PI_PIIO)

Function

The Session I/O Interval (PI_PIIO) record stores performance data, taken at specific intervals, about input/output of all active sessions. Agent for Oracle creates one record for each active session. This is a multi-instance record.

Table 2.115 Session I/O Interval (PI_PIIO) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	25	
Log	No	
LOGIF	(Blank)	

Key Fields

SID (SID)

Lifetime

From the start to the end of a session

Record Size

- Fixed part: 678 bytes
- Variable part: 186 bytes

Table 2.116 Session I/O Interval (PI_PIIO) Fields

Session I/O Interval (PI_PIIO)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Block Changes (BLOCK_CHANGES)	Number of times changes were made to session blocks#2	double	Yes	All	V\$SESS_IO.BLOCK_CHANGES
Block Gets (BLOCK_GETS)	Number of times session blocks were acquired#2	double	Yes	All	V\$SESS_IO.BLOCK_GETS
Cache Hit % (CACHE_HIT_PERCENTAGE)	Cache hit rate#2	double	No	All	$100 * (\text{block_gets} + \text{consistent_gets} - \text{physical_reads}) / (\text{block_gets} + \text{consistent_gets})$
Consistent Changes (CONSISTENT_CHANGES)	Number of times a consistent change was made in	double	Yes	All	V\$SESS_IO.CONSISTENT_CHANGES

	session#2				
Consistent Gets (CONSISTENT_GETS)	Number of times a consistent acquisition was made in session#2	double	Yes	All	V\$SESS_IO.CONSISTENT_GETS
OS PID (PID)	OS's client process ID#1	string (30)	No	All	V\$SESSION.PROCESS
Physical Reads (PHYSICAL_READS)	Number of physical read operations in session#2	double	Yes	All	V\$SESS_IO.PHYSICAL_READS
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIIIO)#1	string (4)	No	All	Agent Collector
SID (SID)	Session ID#1	ulong	No	All	V\$SESS_IO.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
User (USERNAME)	Session's user name#1	string (30)	No	All	V\$SESSION.USERNAME

2.7.52 Session Stat Summary Interval (PI_PIS2)

Function

The Session Stat Summary Interval (PI_PIS2) record stores performance data, taken at specific intervals, about each session and performance indicator of an instance. Agent for Oracle creates one record for each session in an instance. This is a multi-instance record.

If you cannot view the performance data in this record, create Oracle's static data dictionary view `DBA_WAITERS`. To create the static data dictionary view `DBA_WAITERS`, you must execute the `CATBLOCK.SQL` script that is provided by Oracle.

Table 2.117 Session Stat Summary Interval (PI_PIS2) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	105	
Log	No	
LOGIF	(Blank)	

Key Fields

SID (SID)

Lifetime

From the start to the end of a session

Record Size

- Fixed part: 678 bytes
- Variable part: 904 bytes

Table 2.118 Session Stat Summary Interval (PI_PIS2) Fields

Session Stat Summary Interval (PI_PIS2)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Block Changes/Tran (BLOCK_CHANGES_PER_TRANSACTION)	Rate at which each transaction executed database manipulation language (DML) statements ^{#2}	double	No	All	db block changes / user commits
Block Visits/Tran (BLOCK_VISITS_PER_TRANSACTION)	Number of work database read operations executed per transaction ^{#2}	double	No	All	(db block gets + consistent gets) / user commits

Blocking Locks (BLOCKING_LOCKS)	Number of locks owned by the session that are blocking another lock.#2 Correct values cannot be collected in this field, and 0 is always displayed.	double	No	All	--
Cache Hit % (CACHE_HIT_PERCENTAGE)	Percentage ratio of logical read operations to physical read operations#2	double	No	All	$((\text{db block gets} + \text{consistent gets}) - \text{physical reads}) / (\text{db block gets} + \text{consistent gets}) * 100$
Calls/Tran (CALLS_PER_TRANSACTION)	Rate at which client requests were executed per transaction#2	double	No	All	user calls / user commits
Changed Block % (CHANGED_BLOCK_PERCENTAGE)	Percentage indicating the balance between query and database manipulation language (DML) in database applications (this value changes according to the index and application usage)#2	double	No	All	$(\text{db block changes} / (\text{block gets} + \text{consistent gets})) * 100$
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage indicating the extents for which the application needed to check the consistency of read operations#2	double	No	All	$(\text{consistent changes} / \text{consistent gets}) * 100$
Continued Row % (CONTINUED_ROW_PERCENTAGE)	Percentage ratio of rows obtained that were longer than one block or had been moved#2	double	No	All	$(\text{table fetch continued row} / (\text{table fetch by rowid} + \text{table scan rows gotten})) * 100$
Deadlocks (LOCK_DEADLOCKS)	Number of process deadlocks caused by enqueueing (locking) of DDL processing#2	double	Yes	All	V\$SESSTAT.VALUE
Disk Sorts (SORTS_DISK)	Number of disk sort operations#2	double	Yes	All	V\$SESSTAT.VALUE
Lock Conversions (LOCK_CONVERSIONS)	Number of enqueues (locks) whose mode changed (such as from shared to lock)#2	double	Yes	All	V\$SESSTAT.VALUE
Lock Releases (LOCK_RELEASES)	Number of times enqueueing (locking) was released (this statistical information is	double	Yes	All	SUM(V\$SESSTAT.VALUE)

	the same as the lock request count)# ²				
Lock Requests (LOCK_REQUESTS)	Number of times enqueueing (locking) was requested# ²	double	Yes	All	V\$SESSTAT.VALUE
Lock Timeouts (LOCK_TIMEOUTS)	Number of times enqueueing (locking) request was not permitted within the specified wait time# ²	double	Yes	All	V\$SESSTAT.VALUE
Lock Waits (LOCK_WAITS)	Number of times lock request was placed in wait status (the number of lock requests not placed in wait status equals the number of lock requests minus the number of enqueueing waits)# ²	double	Yes	All	V\$SESSTAT.VALUE
Logical Reads (LOGICAL_READS)	Sum of the number of logical read operations in read consistency mode and the number of requests to the current copy of the block# ²	double	Yes	All	db block gets + consistent gets
Memory Sorts (SORTS_MEMORY)	Number of sort operations in memory# ²	double	Yes	All	V\$SESSTAT.VALUE
Non-Index Lookups % (NON_INDEX_LOOKUPS)	Percentage ratio of full table scans where no caching is performed# ²	double	No	All	(table scans (long tables) / (table scans (short tables) + table scans (long tables))) * 100
PGA Memory (PGA_MEMORY)	Size of PGA memory in use during data collection# ²	double	No	All	V\$SESSTAT.VALUE
Physical Reads (PHYSICAL_READS)	Number of times a database block was actually read from disk# ²	double	Yes	All	V\$SESSTAT.VALUE
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations onto disk by DBWR# ²	double	Yes	All	V\$SESSTAT.VALUE
Program (PROGRAM)	OS's program name# ¹	string(48)	No	All	V\$SESSION.PROGRAM
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record# ¹	time_t	No	All	Agent Collector
Record Type	Record name (always	string(4	No	All	Agent Collector

(INPUT_RECORD_TYPE)	PIS2)#1)			
Recursive Calls (RECURSIVE_CALLS)	Number of user calls processed#2	double	Yes	All	V\$SESSTAT.VALUE
Recursive to User Call % (RECURSIVE_TO_USER_CALL_PERCENTAGE)	Correct values cannot be collected in this field. Percentage indicating overhead#2	double	No	All	(recursive calls / user calls) * 100
Redo Log Space Requests (REDO_LOG_SPACE_REQUESTS)	Number of times a user process waited for space in REDO log buffer#2	double	Yes	All	V\$SESSTAT.VALUE
Redo Log Space Wait % (REDO_LOG_SPACE_WAIT_PERCENTAGE)	Percentage indicating the memory allocation#2	double	No	All	(redo log space requests / redo entries) * 100
Row Source % (ROW_SOURCE_PERCENTAGE)	Percentage ratio of rows obtained by full-table scan#2	double	No	All	(table scan rows gotten / (table fetch by rowid + table scan rows gotten)) * 100
Session Cursor Cache Count (SESSION_CURSOR_CACHE_COUNT)	Total number of references to cursor#2	double	Yes	All	V\$SESSTAT.VALUE
Session Cursor Cache Hit % (SESSION_CURSOR_CACHE_HIT_PERCENTAGE)	Number of times an access to session cursor was executed but was not found in cache#2	double	No	All	(session cursor cache hits / session cursor cache count) * 100
Session Cursor Cache Hits (SESSION_CURSOR_CACHE_HITS)	Recorded session cursor cache hit count#2	double	Yes	All	V\$SESSTAT.VALUE
SID (SID)	Session ID#1	ulong	No	All	V\$SESSION.SID
Sort Overflow % (SORT_OVERFLOW_PERCENTAGE)	Percentage ratio of sort operations using temporary segments#2	double	No	All	(sorts (disk) / (sorts (memory) + sorts (disk))) * 100
SQL Net Bytes Rcvd (SQL_NET_BYTES_RECEIVED)	Number of bytes received from clients via SQL*Net#2	double	Yes	All	V\$SESSTAT.VALUE
SQL Net Bytes Sent (SQL_NET_BYTES_SENT)	Number of bytes sent to clients via SQL*Net#2	double	Yes	All	V\$SESSTAT.VALUE
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector

Statement CPU (STATEMENT_CPU)	Total CPU time used by active statements during data collection (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)#2	double	Yes	All	V\$SESSTAT.VALUE
UGA Memory (UGA_MEMORY)	Number of memory segments used#2	double	No	All	V\$SESSTAT.VALUE
User (USERNAME)	Oracle user name#1	string(30)	No	All	V\$SESSION.USERNAME
User Calls (USER_CALLS)	Number of user calls processed#2	double	Yes	All	V\$SESSTAT.VALUE
User Calls / Parse (USER_CALLS_PER_PARSE)	Percentage indicating how well the application is managing the context area#2	double	No	All	user calls / parse count (total)
User Commits (USER_COMMITS)	Number of transactions#2	double	Yes	All	V\$SESSTAT.VALUE
User Rollback % (USER_ROLLBACK_PERCENTAGE)	Percentage ratio of application transactions that failed (rolled back)#2	double	No	All	(user rollbacks / (user commits + user rollbacks)) * 100
User Rollbacks (USER_ROLLBACKS)	Number of rollbacks #2	double	Yes	All	V\$SESSTAT.VALUE
Waiting Locks (WAITING_LOCKS)	Number of locks owned by another session that this session is waiting for#2 Correct values cannot be collected in this field, and 0 is always displayed.	double	No	All	--
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations to all physical I/O devices#2	double	No	All	(physical writes / (physical reads + physical writes)) * 100

2.7.53 Session Statistics (PD_PDSS)

Function

The Session Statistics (PD_PDSS) record stores performance data indicating the status (at a specific point in time) of sessions. Agent for Oracle creates one record for each session in an instance. This is a multi-instance record.

Table 2.119 Session Statistics (PD_PDSS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	125	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Statistic # (STATISTIC_NUM)

Lifetime

From the start to the end of a session

Record Size

- Fixed part: 678 bytes
- Variable part: 186 bytes

Table 2.120 Session Statistics (PD_PDSS) Fields

Session Statistics (PD_PDSS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Class (CLASS)	Statistic class	string (20)	No	All	V\$STATNAME.CLASS where V\$SESSTAT.STATISTIC# = V\$STATNAME.STATISTIC#
Program (PROGRAM)	Name of program being executed	string (48)	No	All	V\$SESSION.PROGRAM where V\$SESSTAT.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector

Record Type (INPUT_RECORD_TYPE)	Record name (always PDSS)	string (4)	No	All	Agent Collector
SID (SID)	Session ID	ulong	No	All	V\$SESSTAT.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Statistic # (STATISTIC_NUM)	Statistic number	double	No	All	V\$SESSTAT.STATISTIC#
Statistic Name (NAME)	Statistic name	string (64)	No	All	V\$STATNAME.NAME where V\$SESSTAT.STATISTIC# = V\$STATNAME.STATISTIC#
User (USERNAME)	Oracle user name	string (30)	No	All	V\$SESSION.USERNAME where V\$SESSTAT.SID = V\$SESSION.SID
Value (VALUE)	Statistical value	double	No	All	V\$SESSTAT.VALUE

2.7.54 Session Statistics Summary (PD_PDS2)

Function

The Session Statistics Summary (PD_PDS2) record stores performance data indicating the status (at a specific point in time) of each session and performance indicator of an instance. Agent for Oracle creates one record for each session in an instance. This is a multi-instance record.

If you cannot view the performance data in this record, create Oracle's static data dictionary view `DBA_WAITERS`. To create the static data dictionary view `DBA_WAITERS`, you must execute the `CATBLOCK.SQL` script that is provided by Oracle.

Table 2.121 Session Statistics Summary (PD_PDS2) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	105	
Log	No	
LOGIF	(Blank)	

Key Fields

SID (SID)

Lifetime

From the start to the end of a session

Record Size

- Fixed part: 678 bytes
- Variable part: 412 bytes

Table 2.122 Session Statistics Summary (PD_PDS2) Fields

Session Statistics Summary (PD_PDS2)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Block Changes/Tran (BLOCK_CHANGES_PER_TRANSACTION)	Rate at which each transaction executed database manipulation language (DML) statements	double	No	All	db block changes / user commits
Block Visits/Tran (BLOCK_VISITS_PER_TRANSACTION)	Number of work database read operations executed	double	No	All	(db block gets + consistent gets) / user commits

	per transaction				
Blocking Locks (BLOCKING_LOCKS)	Number of locks owned by the session that are blocking another lock. Correct values cannot be collected in this field, and 0 is always displayed.	double	No	All	--
Cache Hit % (CACHE_HIT_PERCENTAGE)	Percentage ratio of logical read operations to physical read operations	double	No	All	$((\text{db block gets} + \text{consistent gets}) - \text{physical reads}) / (\text{db block gets} + \text{consistent gets}) * 100$
Calls/Tran (CALLS_PER_TRANSACTION)	Rate at which client requests were executed per transaction	double	No	All	user calls / user commits
Changed Block % (CHANGED_BLOCK_PERCENTAGE)	Percentage indicating the balance between query and database manipulation language (DML) in database applications (this value changes according to the index and application usage)	double	No	All	$(\text{db block changes} / (\text{block gets} + \text{consistent gets})) * 100$
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage indicating the extents for which the application needed to check the consistency of read operations	double	No	All	$(\text{consistent changes} / \text{consistent gets}) * 100$
Continued Row % (CONTINUED_ROW_PERCENTAGE)	Percentage ratio of rows obtained that were longer than one block or had been moved	double	No	All	$(\text{table fetch continued row} / (\text{table fetch by rowed} + \text{table scan rows gotten})) * 100$
Deadlocks (LOCK_DEADLOCKS)	Number of process deadlocks caused by enqueueing (locking) of DDL processing	double	No	All	V\$SESSTAT.VALUE
Disk Sorts (SORTS_DISK)	Number of disk sort operations	double	No	All	V\$SESSTAT.VALUE
Lock Conversions (LOCK_CONVERSIONS)	Number of enqueues (locks) whose mode changed (such as from shared to lock)	double	No	All	V\$SESSTAT.VALUE

Lock Releases (LOCK_RELEASES)	Number of times enqueueing (locking) was released (this statistical information is the same as the lock request count)	double	No	All	SUM (V\$SESSTAT.VALUE)
Lock Requests (LOCK_REQUESTS)	Number of times enqueueing (locking) was requested	double	No	All	V\$SESSTAT.VALUE
Lock Timeouts (LOCK_TIMEOUTS)	Number of times enqueueing (locking) request was not permitted within the specified wait time	double	No	All	V\$SESSTAT.VALUE
Lock Waits (LOCK_WAITS)	Number of times lock request was placed in wait status (the number of lock requests not placed in wait status equals the number of lock requests minus the number of enqueueing waits)	double	No	All	V\$SESSTAT.VALUE
Logical Reads (LOGICAL_READS)	Sum of the number of logical read operations in read consistency mode and the number of requests to the current copy of the block	double	No	All	db block gets + consistent gets
Memory Sorts (SORTS_MEMORY)	Number of sort operations in memory	double	No	All	V\$SESSTAT.VALUE
Non-Index Lookups % (NON_INDEX_LOOKUPS)	Percentage ratio of full table scans where no caching is performed	double	No	All	(table scans (long tables) / (table scans (short tables) + table scans (long tables))) * 100
PGA Memory (PGA_MEMORY)	Size of PGA memory in use during data collection	double	No	All	V\$SESSTAT.VALUE
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations onto disk by DBWR	double	No	All	V\$SESSTAT.VALUE
Physical Reads (PHYSICAL_READS)	Number of times a database block was actually read from disk	double	No	All	V\$SESSTAT.VALUE
Program (PROGRAM)	OS's program name	string (48)	No	All	V\$SESSION.PROGRAM
Record Time	Collection	time_t	No	All	Agent Collector

(RECORD_TIME)	termination time for the performance data stored in the record				
Record Type (INPUT_RECORD_TYPE)	Record name (always PDS2)	string (4)	No	All	Agent Collector
Recursive Calls (RECURSIVE_CALLS)	Number of user calls processed	double	No	All	V\$SESSTAT.VALUE
Recursive to User Call % (RECURSIVE_TO_USER_CALL_PERCENTAGE)	Correct values cannot be collected in this field. Percentage indicating overhead	double	No	All	(recursive calls / user calls) * 100
Redo Log Space Requests (REDO_LOG_SPACE_REQUESTS)	Number of times a user process waited for space in REDO log buffer	double	No	All	V\$SESSTAT.VALUE
Redo Log Space Wait % (REDO_LOG_SPACE_WAIT_PERCENTAGE)	Percentage indicating the memory allocation	double	No	All	(redo log space requests / redo entries) * 100
Row Source % (ROW_SOURCE_PERCENTAGE)	Percentage ratio of rows obtained by full-table scan	double	No	All	(table scan rows gotten / (table fetch by rowid + table scan rows gotten)) * 100
SID (SID)	Session ID	ulong	No	All	V\$SESSION.SID
SQL Net Bytes Rcvd (SQL_NET_BYTES_RECEIVED)	Number of bytes received from clients via SQL*Net	double	No	All	V\$SESSTAT.VALUE
SQL Net Bytes Sent (SQL_NET_BYTES_SENT)	Number of bytes sent to clients via SQL*Net	double	No	All	V\$SESSTAT.VALUE
Session Cursor Cache Count (SESSION_CURSOR_CACHE_COUNT)	Total number of references to cursor	double	No	All	V\$SESSTAT.VALUE
Session Cursor Cache Hit % (SESSION_CURSOR_CACHE_HIT_PERCENTAGE)	Number of times an access to session cursor was executed but was not found in cache	double	No	All	(session cursor cache hits / session cursor cache count) * 100
Session Cursor Cache Hits (SESSION_CURSOR_CACHE_HITS)	Recorded session cursor cache hit count	double	No	All	V\$SESSTAT.VALUE
Sort Overflow % (SORT_OVERFLOW_PERCENTAGE)	Percentage ratio of sort operations using temporary segments	double	No	All	(sorts (disk) / (sorts (memory) + sorts (disk))) * 100

Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Statement CPU (STATEMENT_CPU)	Total CPU time used by active statements during data collection (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	double	No	All	V\$SESSTAT.VALUE
UGA Memory (UGA_MEMORY)	Number of memory segments used	double	No	All	V\$SESSTAT.VALUE
User (USERNAME)	Oracle user name	string (30)	No	All	V\$SESSION.USERNAME
User Calls (USER_CALLS)	Number of user calls processed	double	No	All	V\$SESSTAT.VALUE
User Calls / Parse (USER_CALLS_PER_PARSE)	Percentage indicating how well the application is managing the context area	double	No	All	user calls / parse count (total)
User Commits (USER_COMMITS)	Number of transactions	double	No	All	V\$SESSTAT.VALUE
User Rollback % (USER_ROLLBACK_PERCENTAGE)	Percentage ratio of application transactions that failed (rolled back)	double	No	All	(user rollbacks / (user commits + user rollbacks)) * 100
User Rollbacks (USER_ROLLBACKS)	Number of rollbacks	double	No	All	V\$SESSTAT.VALUE
Waiting Locks (WAITING_LOCKS)	Number of locks owned by another session that this session is waiting for. Correct values cannot be collected in this field, and 0 is always displayed.	double	No	All	--
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations to all physical I/O devices	double	No	All	(physical writes / (physical reads + physical writes)) * 100

2.7.55 Session Wait (PD_PDWA)

Function

The Session Wait (PD_PDWA) record stores performance data indicating the status (at a specific point in time) of session waits. Agent for Oracle creates one record for each wait in a single session. This is a multi-instance record.

Table 2.123 Session Wait (PD_PDWA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	155	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Seq # (SEQ_NUM)

Lifetime

From the start to the end of a session

Record Size

- Fixed part: 678 bytes
- Variable part: 409 bytes

Table 2.124 Session Wait (PD_PDWA) Fields

Session Wait (PD_PDWA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Event (EVENT)	Resource or event the session is waiting for	string(64)	No	All	V\$SESSION_WAIT.EV ENT
P1 (P1)	Additional parameter 1	ulong	No	All	V\$SESSION_WAIT.P1
P1 Text (P1_TEXT)	Description of additional parameter 1	string(64)	No	All	V\$SESSION_WAIT.P1 TEXT
P2 (P2)	Additional parameter 2	ulong	No	All	V\$SESSION_WAIT.P2
P2 Text	Description of	string(64)	No	All	V\$SESSION_WAIT.P2

(P2_TEXT)	additional parameter 2				TEXT
P3 (P3)	Additional parameter 3	ulong	No	All	V\$SESSION_WAIT.P3
P3 Text (P3_TEXT)	Description of additional parameter 3	string(64)	No	All	V\$SESSION_WAIT.P3 TEXT
Program (PROGRAM)	Name of program being executed	string(48)	No	All	V\$SESSION.PROGRAM where V\$SESSION_WAIT.SID = V\$SESSION.SID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDWA)	string(4)	No	All	Agent Collector
SID (SID)	Session ID	ulong	No	All	V\$SESSION_WAIT.SID
Seq # (SEQ_NUM)	Number identifying the wait (the value of this field is incremented for each wait)	double	No	All	V\$SESSION_WAIT.SEQ#
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
State (STATE)	Status of the shared server. Valid values are WAITING (waiting for the data collection time), WAITED KNOWN TIME (the value of the WAIT_TIME field is the previous wait time), WAITED SHORT TIME (the last wait is within 100 seconds), and WAITED UNKNOWN TIME (the last wait is unknown).	string(19)	No	All	V\$SESSION_WAIT.STATE
User (USERNAME)	Oracle user name	string(30)	No	All	V\$SESSION.USERNAME where V\$SESSION_WAIT.SID = V\$SESSION.SID
Wait Time (WAIT_TIME)	Session wait time. 0 indicates that the session is currently in wait status. Otherwise, the value indicates the session's previous	long	No	All	V\$SESSION_WAIT.WAIT_TIME

	wait time. To collect the value of this field, the <code>TIMED_STATISTICS</code> parameter must be set to <code>TRUE</code> in the <code>init.ora</code> file.				
Wait Time String (<code>WAIT_TIME_STRING</code>)	Session wait time. 0 indicates that the session is currently in wait status. Otherwise, the value indicates the session's previous wait time. To collect the value of this field, the <code>TIMED_STATISTICS</code> parameter must be set to <code>TRUE</code> in the <code>init.ora</code> file.	string(20)	No	All	<code>V\$SESSION_WAIT.WAIT_TIME</code>

2.7.56 SGA Components (PD_PDSG)

Function

The SGA Components (PD_PDSG) record stores performance data indicating the status (at a specific point in time) of the system global area (SGA). Agent for Oracle creates one record for each system global area (SGA). This is a multi-instance record.

Table 2.125 SGA Components (PD_PDSG) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	115	
Log	No	
LOGIF	(Blank)	

Key Fields

Component Name (NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 43 bytes

Table 2.126 SGA Components (PD_PDSG) Fields

SGA Components (PD_PDSG)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Bytes (BYTES)	Memory size in bytes	double	No	All	V\$SGASTAT.BYTES V\$SGASTAT.POOL SUM(bytes) where pool is not null group by pool
Component Name (NAME)	Name of the SGA component	string(26)	No	All	V\$SGASTAT.NAME V\$SGASTAT.POOL
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDSG)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Total Bytes (PD_PDSG_TOTAL_BYTES)	Total size of memory in bytes used by each SGA component	double	No	All	V\$SGASTAT.BYTES

2.7.57 Shared Cursor Cache (PD_PDC)

Function

The Shared Cursor Cache (PD_PDC) record stores performance data indicating the status (at a specific point in time) of the shared cursor cache. Agent for Oracle creates one record for each shared cursor cache. This is a multi-instance record.

Table 2.127 Shared Cursor Cache (PD_PDC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	10	
Log	No	
LOGIF	(Blank)	

Key Fields

Addrhash (ADDRHASH)

Lifetime

From the loading to the unloading from the shared SQL area

Record Size

- Fixed part: 678 bytes
- Variable part: 1,296 bytes

Table 2.128 Shared Cursor Cache (PD_PDC) Fields

Shared Cursor Cache (PD_PDC)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Action (ACTION)	Name of the action that was executing when the first SQL statement was analyzed	string(32)	No	All	V\$SQLAREA.ACTION
Addrhash (ADDRHASH)	Value identifying the SQL statement being executed	string(38)	No	All	V\$SQLAREA.ADDRESS V\$SQLAREA.HASH_VALUE
Buffer Gets (BUFFER_GETS)	Total number of buffers obtained by this cursor and by all cursors executed by this cursor	double	No	All	V\$SQLAREA.BUFFER_GETS
Command Type (COMMAND_TYPE)	Command type	string(32)	No	All	V\$SQLAREA.COMMAND_TYPE

Disk Reads (DISK_READS)	Number of disk blocks read by this cursor and by all cursors executed by this cursor	double	No	All	V\$SQLAREA.DISK_READS
Executions (EXECUTIONS)	Number of times SQL statement was executed	double	No	All	V\$SQLAREA.EXECUTIONS
First Load Time (FIRST_LOAD_TIME)	First time the cursor was loaded into system global area (SGA)	string(19)	No	All	V\$SQLAREA.FIRST_LOAD_TIME
Invalidations (INVALIDATIONS)	Number of times the cursor's context was invalid for any of the following reasons: <ul style="list-style-type: none"> Table referenced by cursor was deleted Validity was checked Index was specified 	double	No	All	V\$SQLAREA.INVALIDATIONS
Kept Versions (KEPT_VERSIONS)	Number of versions of the same SQL statement, package, procedure, function, and trigger anonymous PL/SQL block in the shared pool	ulong	No	All	V\$SQLAREA.KEPT_VERSIONS
Loaded Versions (LOADED_VERSIONS)	Versions of the cursor that have been entirely loaded because no outdated information exists	ulong	No	All	V\$SQLAREA.LOADED_VERSIONS
Loads (LOADS)	Number of times a cursor was loaded because the cursor body was not used while the text of the SQL statement was in cache or because the cursor was no longer valid	double	No	All	V\$SQLAREA.LOADS
Module (MODULE)	Module name when the first SQL statement was analyzed	string(48)	No	All	V\$SQLAREA.MODULE
Open Versions (OPEN_VERSIONS)	Number of versions of the open cursor belonging to the user	ulong	No	All	V\$SQLAREA.OPEN_VERSIONS
Parse Calls (PARSE_CALLS)	Number of times this user issued an analysis call to this cursor	double	No	All	V\$SQLAREA.PARSE_CALLS
Parsing Schema ID (PARSING_SCHEMA_ID)	Schema ID used to analyze SQL statements	long	No	All	V\$SQLAREA.PARSING_SCHEMA_ID
Parsing User ID (PARSING_USER_ID)	User ID that analyzed the SQL statements	long	No	All	V\$SQLAREA.PARSING_USER_ID
Persistent Mem (PERSISTENT_MEM)	Memory size (in bytes) per user while the cursor was valid	double	No	All	V\$SQLAREA.PERSISTENT_MEM

Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDC)	string(4)	No	All	Agent Collector
Rows Processed (ROWS_PROCESSED)	Number of rows returned by processing or SQL statements	double	No	All	V\$SQLAREA.ROWS_PROCESSED
Runtime Mem (RUNTIME_MEM)	Memory size (in bytes) required per user only during the execution	double	No	All	V\$SQLAREA.RUNTIME_MEM
SQL Text (SQL_TEXT)	SQL text or PL/SQL statement that requires the cursor	string(1000)	No	All	V\$SQLAREA.SQL_TEXT
Sharable Mem (SHARABLE_MEM)	Memory size that can be shared by users	ulong	No	All	V\$SQLAREA.SHARABLE_MEM
Sorts (SORTS)	Number of sort operations executed by SQL statements	double	No	All	V\$SQLAREA.SORTS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Users Executing (USERS_EXECUTING)	Number of users currently executing the cursor	long	No	All	V\$SQLAREA.USERS_EXECUTING
Users Opening SQL (USERS_OPENING_SQL)	Number of users currently using the open cursor to analyze statements	long	No	All	V\$SQLAREA.USER_OPENING_SQL
Version Count (VERSION_COUNT)	Number of cursor versions (multiple users may execute the same SQL statement on different versions of a single table)	ulong	No	All	V\$SQLAREA.VERSION_COUNT

2.7.58 Shared Server (PD_PDSH)

Function

The Shared Server (PD_PDSH) record stores performance data indicating the status (at a specific point in time) of the shared servers. Agent for Oracle creates one record for each shared server in an instance. This is a multi-instance record.

Table 2.129 Shared Server (PD_PDSH) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	50	
Log	No	
LOGIF	(Blank)	

Key Fields

Shared Server Name (*NAME*)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 108 bytes

Table 2.130 Shared Server (PD_PDSH) Fields

Shared Server (PD_PDSH)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Breaks (BREAKS)	Number of breaks (pauses)	double	No	All	V\$SHARED_SERVER.BRE AKS
Busy (BUSY)	Total busy time in 1/100 seconds	double	No	All	V\$SHARED_SERVER.BUS Y
Busy % (PERCENT_BUSY)	Percentage ratio of the time the shared server was busy	double	No	All	(V\$SHARED_SERVER.BU SY / (V\$SHARED_SERVER.BU SY + V\$SHARED_SERVER.IDL E)) * 100
Bytes (BYTES)	Total size of messages in bytes	double	No	All	V\$SHARED_SERVER.BYT ES

Circuit (CIRCUIT)	Address of the circuit that is currently providing the service	string(16)	No	All	V\$SHARED_SERVER.CIRCUIT
Idle (IDLE)	Total idle time in 1/100 seconds	double	No	All	V\$SHARED_SERVER.IDLE
Idle % (PERCENT_IDLE)	Percentage ratio of the time the shared server was idle	double	No	All	(V\$SHARED_SERVER.IDLE / (V\$SHARED_SERVER.BUSY + V\$SHARED_SERVER.IDLE)) * 100
Messages (MESSAGES)	Number of messages processed	double	No	All	V\$SHARED_SERVER.MESSAGES
Oracle PID (PID)	Oracle process ID of the shared server process	long	No	All	V\$PROCESS.PID where V\$SHARED_SERVER.PADDR = V\$PROCESS.ADDR
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDSH)	string(4)	No	All	Agent Collector
Requests (REQUESTS)	Number of requests retrieved from the common queue while the server was running	double	No	All	V\$SHARED_SERVER.REQUESTS
Shared Server Name (NAME)	Name of the shared server	string(5)	No	All	V\$SHARED_SERVER.NAME
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Status; one of the following: EXEC: Under SQL execution WAIT (ENQ): Waiting for lock WAIT (SEND): Waiting to transfer data to user WAIT (COMMON): Idle, waiting for a user request WAIT (RESET): Waiting for a circuit to reset after break QUIT: Terminating	string(16)	No	All	V\$SHARED_SERVER.STATUS

2.7.59 Shared Server Interval (PI_PISH)

Function

The Shared Server Interval (PI_PISH) record stores performance data, taken at specific intervals, about shared servers. Agent for Oracle creates one record for each shared server in an instance. This is a multi-instance record.

Table 2.131 Shared Server Interval (PI_PISH) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	40	
Log	No	
LOGIF	(Blank)	

Key Fields

Shared Server Name (NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 204 bytes

Table 2.132 Shared Server Interval (PI_PISH) Fields

Shared Server Interval (PI_PISH)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Breaks (BREAKS)	Number of breaks (pauses) ^{#2}	double	Yes	All	V\$SHARED_SERV ER.BREAKS
Busy (BUSY)	Total busy time in 1/100 seconds ^{#2}	double	Yes	All	V\$SHARED_SERV ER.BUSY
Busy % (PERCENT_BUSY)	Percentage ratio of the time the shared server was busy ^{#2}	double	No	All	(V\$SHARED_SERV ER.BUSY / (V\$SHARED_SERV ER.BUSY + V\$SHARED_SERV ER.IDLE)) * 100
Bytes (BYTES)	Total size of messages in bytes ^{#2}	double	Yes	All	V\$SHARED_SERV ER.BYTES

Circuit (CIRCUIT)	Address of the circuit that is currently providing the service ^{#1}	string(16)	No	All	V\$SHARED_SERVER.CIRCUIT
Idle (IDLE)	Total idle time in 1/100 seconds ^{#2}	double	Yes	All	V\$SHARED_SERVER.IDLE
Idle % (PERCENT_IDLE)	Percentage ratio of the time the shared server was idle ^{#2}	double	No	All	(V\$SHARED_SERVER.IDLE / (V\$SHARED_SERVER.BUSY + V\$SHARED_SERVER.IDLE)) * 100
Messages (MESSAGES)	Number of messages processed ^{#2}	double	Yes	All	V\$SHARED_SERVER.MESSAGES
Oracle PID (PID)	Oracle process ID of the shared server process ^{#1}	long	No	All	V\$PROCESS.PID where V\$SHARED_SERVER.PADDR = V\$PROCESS.ADDR
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PISH) ^{#1}	string(4)	No	All	Agent Collector
Requests (REQUESTS)	Number of requests retrieved from the common queue while the server was running ^{#2}	double	Yes	All	V\$SHARED_SERVER.REQUESTS
Shared Server Name (NAME)	Name of the shared server ^{#1}	string(5)	No	All	V\$SHARED_SERVER.NAME
Start Time (START_TIME)	Collection start time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector
Status (STATUS)	Status: one of the following: ^{#1} EXEC: Under SQL execution WAIT (ENQ): Waiting for lock WAIT (SEND): Waiting to transfer data to user WAIT (COMMON): Idle, waiting for a user request WAIT (RESET):	string(16)	No	All	V\$SHARED_SERVER.STATUS

	Waiting for a circuit to reset after break QUIT : Terminating				
--	---	--	--	--	--

2.7.60 Sort Segment (PD_PDSR)

Function

The Sort Segment (PD_PDSR) record stores performance data indicating the status (at a specific point in time) of sort segments in a database. Agent for Oracle creates one record for each sort segment. This is a multi-instance record.

Table 2.133 Sort Segment (PD_PDSR) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	25	
Log	No	
LOGIF	(Blank)	

Key Fields

- Tablespace Name (TABLESPACE_NAME)
- Segment File (SEGMENT_FILE)
- Segment Block (SEGMENT_BLOCK)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 186 bytes

Table 2.134 Sort Segment (PD_PDSR) Fields

Sort Segment (PD_PDSR)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Added Extents (ADDED_EXTENTS)	Number of extents allocated	double	No	All	V\$SORT_SEGMENTS.ADDDED_EXTENTS
Current Users (CURRENT_USERS)	Number of active users for the segment	double	No	All	V\$SORT_SEGMENTS.CURRENT_USERS
Extent Hits (EXTENT_HITS)	Number of times an unused extent was found in the pool	double	No	All	V\$SORT_SEGMENTS.EXTENT_HITS
Extent Size	Size of extent	double	No	All	V\$SORT_SEGMENTS

(EXTENT_SIZE)					T.EXTENT_SIZE
Free Blocks (FREE_BLOCKS)	Blocks that are not allocated to any sort operation	double	No	All	V\$SORT_SEGMENT.FREE_BLOCKS
Free Extents (FREE_EXTENTS)	Extents that are not allocated to any sort operation	double	No	All	V\$SORT_SEGMENT.FREE_EXTENTS
Free Requests (FREE_REQUESTS)	Number of allocation release requests	double	No	All	V\$SORT_SEGMENT.FREE_REQUESTS
Freed Extents (FREED_EXTENTS)	Number of extents whose allocation was released	double	No	All	V\$SORT_SEGMENT.FREED_EXTENTS
Max Blocks (MAX_BLOCKS)	Maximum number of blocks used	double	No	All	V\$SORT_SEGMENT.MAX_BLOCKS
Max Size (MAX_SIZE)	Maximum number of extents used	double	No	All	V\$SORT_SEGMENT.MAX_SIZE
Max Sort Blocks (MAX_SORT_BLOCKS)	Maximum number of blocks used in individual sort operations	double	No	All	V\$SORT_SEGMENT.MAX_SORT_BLOCKS
Max Sort Size (MAX_SORT_SIZE)	Maximum number of extents used in individual sort operations	double	No	All	V\$SORT_SEGMENT.MAX_SORT_SIZE
Max Used Blocks (MAX_USED_BLOCKS)	Maximum number of blocks used in all sort operations	double	No	All	V\$SORT_SEGMENT.MAX_USED_BLOCKS
Max Used Size (MAX_USED_SIZE)	Maximum number of extents used in all sort operations	double	No	All	V\$SORT_SEGMENT.MAX_USED_SIZE
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDSR)	string(4)	No	All	Agent Collector
Segment Block (SEGMENT_BLOCK)	Block number of first extent	double	No	All	V\$SORT_SEGMENT.SEGMENT_BLOCK
Segment File (SEGMENT_FILE)	File number of first extent	ushort	No	All	V\$SORT_SEGMENT.SEGMENT_FILE
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

Tablespace Name (TABLESPACE_NAME)	Name of tablespace	string(31)	No	All	V\$SORT_SEGMENT. TABLESPACE_NAME
Total Blocks (TOTAL_BLOCKS)	Number of blocks in the segment	double	No	All	V\$SORT_SEGMENT. TOTAL_BLOCKS
Total Extents (TOTAL_EXTENTS)	Number of extents for the segment	double	No	All	V\$SORT_SEGMENT. TOTAL_EXTENTS
Used Blocks (USED_BLOCKS)	Number of blocks allocated for active sort operation	double	No	All	V\$SORT_SEGMENT. USED_BLOCKS
Used Extents (USED_EXTENTS)	Number of extents allocated for active sort operation	double	No	All	V\$SORT_SEGMENT. USED_EXTENTS

2.7.61 Sort Segment Interval (PI_PISR)

Function

The Sort Segment Interval (PI_PISR) record stores performance data, taken at specific intervals, about sort segments in a database. Agent for Oracle creates one record for each sort segment. This is a multi-instance record.

Table 2.135 Sort Segment Interval (PI_PISR) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	15	
Log	No	
LOGIF	(Blank)	

Key Fields

- Segment File (SEGMENT_FILE)
- Segment Block (SEGMENT_BLOCK)

Lifetime

From the start to the stop of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 390 bytes

Table 2.136 Sort Segment Interval (PI_PISR) Fields

Sort Segment Interval (PI_PISR)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Added Extents (ADDED_EXTENTS)	Number of extents allocated#2	double	Yes	All	V\$SORT_SEGMENT.ADDED_EXTENTS
Current Users (CURRENT_USERS)	Number of active users for the segment#2	double	No	All	V\$SORT_SEGMENT.CURRENT_USERS
Extent Hits (EXTENT_HITS)	Number of times an unused extent was found in the pool#2	double	Yes	All	V\$SORT_SEGMENT.EXTENT_HITS
Extent Size (EXTENT_SIZE)	Size of extent#1	double	No	All	V\$SORT_SEGMENT.EXTENT_SIZE

Free Blocks (FREE_BLOCKS)	Blocks that are not allocated to any sort operation#2	double	No	All	V\$SORT_SEGMENT.FREE_BLOCKS
Free Extents (FREE_EXTENTS)	Extents that are not allocated to any sort operation#2	double	No	All	V\$SORT_SEGMENT.FREE_EXTENTS
Free Requests (FREE_REQUESTS)	Number of allocation release requests#2	double	Yes	All	V\$SORT_SEGMENT.FREE_REQUESTS
Freed Extents (FREED_EXTENTS)	Number of extents whose allocation was released#2	double	Yes	All	V\$SORT_SEGMENT.FREED_EXTENTS
Max Blocks (MAX_BLOCKS)	Maximum number of blocks used#2	double	No	All	V\$SORT_SEGMENT.MAX_BLOCKS
Max Size (MAX_SIZE)	Maximum number of extents used#2	double	No	All	V\$SORT_SEGMENT.MAX_SIZE
Max Sort Blocks (MAX_SORT_BLOCKS)	Maximum number of blocks used in individual sort operations#2	double	No	All	V\$SORT_SEGMENT.MAX_SORT_BLOCKS
Max Sort Size (MAX_SORT_SIZE)	Maximum number of extents used in individual sort operations#2	double	No	All	V\$SORT_SEGMENT.MAX_SORT_SIZE
Max Used Blocks (MAX_USED_BLOCKS)	Maximum number of blocks used in all sort operations#2	double	No	All	V\$SORT_SEGMENT.MAX_USED_BLOCKS
Max Used Size (MAX_USED_SIZE)	Maximum number of extents used in all sort operations#2	double	No	All	V\$SORT_SEGMENT.MAX_USED_SIZE
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PISR)#1	string (4)	No	All	Agent Collector
Segment Block (SEGMENT_BLOCK)	Block number of first extent#1	double	No	All	V\$SORT_SEGMENT.SEGMENT_BLOCK
Segment File (SEGMENT_FILE)	File number of first extent#1	ushort	No	All	V\$SORT_SEGMENT.SEGMENT_FILE
Start Time (START_TIME)	Collection start time for the performance data stored in the	time_t	No	All	Agent Collector

	record# ¹				
Tablespace Name (TABLESPACE_NAME)	Name of tablespace# ¹	string (31)	No	All	V\$SORT_SEGMENT.TABLESPACE_NAME
Total Blocks (TOTAL_BLOCKS)	Number of blocks in the segment# ²	double	No	All	V\$SORT_SEGMENT.TOTAL_BLOCKS
Total Extents (TOTAL_EXTENTS)	Number of extents for the segment# ²	double	No	All	V\$SORT_SEGMENT.TOTAL_EXTENTS
Used Blocks (USED_BLOCKS)	Number of blocks allocated for active sort operation# ²	double	No	All	V\$SORT_SEGMENT.USED_BLOCKS
Used Extents (USED_EXTENTS)	Number of extents allocated for active sort operation# ²	double	No	All	V\$SORT_SEGMENT.USED_EXTENTS

2.7.62 SQL Text (PD_PDSQ)

Function

The SQL Text (PD_PDSQ) record stores performance data indicating the status (at a specific point in time) of the SQL text for a cursor in the shared cursor cache. Agent for Oracle creates one record for each SQL text for a cursor in the shared cursor cache. This is a multi-instance record.

This record cannot be set to store performance data in the Store database by `jpcasrec update` command of Performance Reporter because it is available only in real-time.

You use this record only when calling the SQL Text report provided by the solution set as a drilldown report. You cannot display a report using this record individually.

If you are using this record and displaying a report with SQL, and the user executing the SQL statement is not the user who created `LSC_13_PLAN_TABLE` in the `sp_inst.sql` script, then the system outputs a `FAILED` message to the Explain Plan (EXPLAIN_PLAN) field. To correctly display the report, the user specified in the `oracle_user` property must execute the `sp_inst.sql` script.

This record displays a drilldown report of the `SELECT`, `INSERT`, `UPDATE`, and `DELETE` statements. It does not display a drilldown report of any other SQL statement or any PL/SQL package.

Notes:

- If you specify an account other than `sys` for Agent for Oracle, the value of the Explain Plan (EXPLAIN_PLAN) field in the SQL Text (PD_PDSQ) record cannot be obtained for an operation on an object in the `sys` schema. In such a case, the Explain Plan (EXPLAIN_PLAN) field stores the message `Explain Plan Failed`. If you want to obtain, for a `sys` schema object, the value of the Explain Plan (EXPLAIN_PLAN) field in the SQL Text (PD_PDSQ) record, specify `sys` as the account to be used by Agent for Oracle.
- If the account used by the Agent for Oracle has no privileges to access, or fails to reference, an object that belongs to a schema of the user who executed SQL, the value of the Explain Plan (EXPLAIN_PLAN) field in the SQL Text (PD_PDSQ) record cannot be acquired. If the value of the EXPLAIN_PLAN field cannot be acquired, the message `Explain Plan Failed` is stored in the field. If you want to acquire the value of the field, grant appropriate privileges to access the schema or execute the SQL for manipulating the field in the `owner.table-name` format.

Default and Changeable Values

None

Key Fields

Addrhash (ADDRHASH)

Lifetime

None

Record Size

- Fixed part: 678 bytes
- Variable part: 30,051 bytes

Table 2.137 SQL Text (PD_PDSQ) Fields

SQL Text (PD_PDSQ)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addrhash (ADDRHASH)	Address and hash value used to identify the cached cursor	string(38)	No	All	V\$SQLTEXT.ADDRESS V\$SQLTEXT.HASH_VALUE
Command Type (COMMAND_TYPE)	Type of SQL statement	string(10)	No	All	V\$SQLTEXT.COMMAND_TYPE
Explain Plan (EXPLAIN_PLAN)	Description of the SQL statement	string(30000)	No	All	Agent Collector
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDSQ)	string(4)	No	All	Agent Collector
SQL Text (SQL_TEXT)	Portion of the SQL text	string(30000)	No	All	V\$SQLTEXT.SQL_TEXT
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

2.7.63 SQL Text - Performance Based (PD_PDES)

Function

The SQL Text - Performance Based (PD_PDES) record stores performance data indicating the status (at a specific point in time) of the SQL text that satisfies the following conditions (see **Note**). Agent for Oracle creates one record for each SQL statement that satisfies the conditions. This is a multi-instance record.

Note:

The following describes the conditions:

1. Data is sorted in order of the number of disk read operations per execution of an object.
2. The result of step 1 indicates that the number of disk read operations per execution of an object exceeds 1,000. Alternatively, the number of I/O operations per execution of an object exceeds 10,000.

Table 2.138 SQL Text - Performance Based (PD_PDES) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	40	
Log	No	
LOGIF	(Blank)	

Key Fields

Addrhash (ADDRHASH)

Lifetime

From the loading to the unloading from the shared SQL area

Record Size

- Fixed part: 678 bytes
- Variable part: 10,131 bytes

Table 2.139 SQL Text - Performance Based (PD_PDES) Fields

SQL Text - Performance Based (PD_PDES)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Addrhash (ADDRHASH)	Address and hash value used to identify the cached cursor	string (38)	No	All	V\$SQLAREA.ADDRESS + V\$SQLAREA.HASH_VALUE

Buffer Gets (BUFFER_GETS)	Total buffer acquired in all child cursors	double	No	All	V\$SQLAREA.BUFFER_GETS
Disk Reads (DISK_READS)	Total disk read operations in all child cursors	double	No	All	V\$SQLAREA.DISK_READS
Disk Reads/Exec (DISK_READS_PER_EXECUTION)	Number of physical read operations required per execution	double	No	All	V\$SQLAREA.DISK_READS / V\$SQLAREA.EXECUTIONS
Executions (EXECUTIONS)	Number of times the object was executed after this object was placed in the library cache	double	No	All	V\$SQLAREA.EXECUTIONS
Hit % (HIT_PERCENTAGE)	Percentage ratio of buffer read operation to all read operations	double	No	All	100 * (V\$SQLAREA.BUFFER_GETS - V\$SQLAREA.DISK_READS) / V\$SQLAREA.BUFFER_GETS
Logical Reads/Exec (LOGICAL_IO_PER_EXECUTION)	Number of logical read operations required per execution	double	No	All	V\$SQLAREA.BUFFER_GETS / V\$SQLAREA.EXECUTIONS
Parsing User (PARSING_USER)	User who analyzed the SQL statement	string (30)	No	All	USER\$.NAME where USER\$.USER# = V\$SQLAREA.PARSING_USER_ID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDES)	string (4)	No	All	Agent Collector
SEQNO (SEQUENCE)	Number of times the cursor was found during data collection	ulong	No	All	Agent Collector
SQL Text (SQL_TEXT)	SQL text for the cursor	string (10000)	No	All	V\$SQLTEXT.SQL_TEXT
Sorts (SORTS)	Total number of sort operations executed on all child cursors	double	No	All	V\$SQLAREA.SORTS
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

2.7.64 SQL*Net Listener (PD_PDNL)

Function

The SQL*Net Listener (PD_PDNL) record stores performance data indicating the status and overview (at a specific point in time) of an SQL*Net Listener. This status information includes the status of, and overview information about, the default SQL*Net Listener. If the listener is not active, the **Alias** field is empty.

If SQL*Net has not been installed, an attempt to display a report that uses this record will display the No records returned message.

Table 2.140 SQL*Net Listener (PD_PDNL) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of a listener instance

Record Size

- Fixed part: 1,366 bytes
- Variable part: 0 bytes

Table 2.141 SQL*Net Listener (PD_PDNL) Fields

SQL*Net Listener (PD_PDNL)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Alias (ALIAS)	Name of the listener	string(20)	No	All	lsnrctl stat
Availability (AVAILABILITY)	Listener task's availability status; valid value is 0 (inactive) or 1 (active)	short	No	All	Agent Collector
Change Time (CHANGE_TIME)	Time the availability task was changed	time_t	No	All	Agent Collector

Handlers (HANDLERS)	Number of services processed by the listener task	ushort	No	8.1	lsnrctl stat
Log File (LOG_FILE)	Location of log file	string(256)	No	All	lsnrctl stat
Parameter File (PARAMETER_FILE)	Location of parameter file	string(256)	No	All	lsnrctl stat
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDNL)	string(4)	No	All	Agent Collector
Security (SECURITY)	Security status	string(5)	No	All	lsnrctl stat
Start Date (START_DATE)	Listener start date and time	string(20)	No	All	lsnrctl stat
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Trace Level (TRACE_LEVEL)	Listener's trace level	string(5)	No	All	lsnrctl stat
Up Time (UP_TIME)	Total run time	string(30)	No	All	lsnrctl stat
Version (VERSION)	Listener's version	string(80)	No	All	lsnrctl stat

2.7.65 SQL*Net Listeners (PD_PDLs)

Function

The SQL*Net Listeners (PD_PDLs) record stores performance data indicating the status and overview (at a specific point in time) of each defined listener. Agent for Oracle creates one record for each name specified in `listener_name`. This is a multi-instance record.

If you omit the listener name when setting an instance, Agent for Oracle monitors the default listener. If the listener is not active, the **Alias** field is empty.

If SQL*Net has not been installed, an attempt to display a report that uses this record will display the No records returned message.

Table 2.142 SQL*Net Listeners (PD_PDLs) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

Alias (`ALIAS`)

Lifetime

From the creation to the deletion of a listener instance

Record Size

- Fixed part: 678 bytes
- Variable part: 688 bytes

Table 2.143 SQL*Net Listeners (PD_PDLs) Fields

SQL*Net Listeners (PD_PDLs)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Alias (<code>ALIAS</code>)	Name of the listener	string(20)	No	All	lsnrctl stat
Availability (<code>AVAILABILITY</code>)	Listener task's availability status; valid value is 0 (inactive) or 1 (active)	short	No	All	Agent Collector
Change Time (<code>CHANGE_TIME</code>)	Time the availability task was changed	time_t	No	All	Agent Collector

Handlers (HANDLERS)	Number of services processed by the listener task	short	No	8.1	lsnrctl stat
Log File (LOG_FILE)	Location of log file	string(256)	No	All	lsnrctl stat
Parameter File (PARAMETER_FILE)	Location of parameter file	string(256)	No	All	lsnrctl stat
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDL\$)	string(4)	No	All	Agent Collector
Security (SECURITY)	Security status	string(5)	No	All	lsnrctl stat
Start Date (START_DATE)	Listener start date and time	string(20)	No	All	lsnrctl stat
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Trace Level (TRACE_LEVEL)	Listener's trace level	string(5)	No	All	lsnrctl stat
Up Time (UP_TIME)	Total run time	string(30)	No	All	lsnrctl stat
Version (VERSION)	Listener's version	string(80)	No	All	lsnrctl stat

2.7.66 System Event (PD_PDSE)

Function

The System Event (PD_PDSE) record stores the performance data indicating the status (at a specific point in time) of each queued event in an instance at the system level. Agent for Oracle creates one record for each queued event. This is a multi-instance record.

Table 2.144 System Event (PD_PDSE) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	15	
Log	No	
LOGIF	(Blank)	

Key Fields

Event (EVENT)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 97 bytes

Table 2.145 System Event (PD_PDSE) Fields

System Event (PD_PDSE)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Wait (AVERAGE_WAIT)	Average wait time for the event (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	double	No	All	V\$SYSTEM_EVENT.AVERAGE_WAIT
Event (EVENT)	Name of the event the system is waiting for	string(64)	No	All	V\$SYSTEM_EVENT.EVENT
Record Time (RECORD_TIME)	Collection termination time for the	time_t	No	All	Agent Collector

	performance data stored in the record				
Record Type (INPUT_RECORD_TYPE)	Record name (always PDSE)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Time Waited (TIME_WAITED)	Total wait time for the event (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)	double	No	All	V\$SYSTEM_EVENT.TIME_WAITED
Total Timeouts (TOTAL_TIMEOUTS)	Number of timeouts for the event	double	No	All	V\$SYSTEM_EVENT.TOTAL_TIMEOUTS
Total Waits (TOTAL_WAITS)	Number of waits for the event	double	No	All	V\$SYSTEM_EVENT.TOTAL_WAITS

2.7.67 System Event Interval (PI_PISE)

Function

The System Event Interval (PI_PISE) record stores performance data, taken at specific intervals, about each queued event in an instance at the system level. Agent for Oracle creates one record for each queued event. This is a multi-instance record.

Table 2.146 System Event Interval (PI_PISE) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	10	
Log	No	
LOGIF	(Blank)	

Key Fields

Event (EVENT)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 145 bytes

Table 2.147 System Event Interval (PI_PISE) Fields

System Event Interval (PI_PISE)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Wait (AVERAGE_WAIT)	Average wait time for the event (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file) ^{#2}	double	No	All	V\$SYSTEM_EVENT.AVERAGE_WAIT
Event (EVENT)	Name of the event the system is waiting for ^{#1}	string(64)	No	All	V\$SYSTEM_EVENT.EVENT
Record Time (RECORD_TIME)	Collection termination time for the performance	time_t	No	All	Agent Collector

	data stored in the record#1				
Record Type (INPUT_RECORD_TYPE)	Record name (always PISE)#1	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Time Waited (TIME_WAITED)	Total wait time for the event (to collect the value of this field, the TIMED_STATISTICS parameter must be set to TRUE in the init.ora file)#2	double	Yes	All	V\$SYSTEM_EVENT.TIME_WAITED
Total Timeouts (TOTAL_TIMEOUTS)	Number of timeouts for the event#2	double	Yes	All	V\$SYSTEM_EVENT.TOTAL_TIMEOUTS
Total Waits (TOTAL_WAITS)	Number of waits for the event#2	double	Yes	All	V\$SYSTEM_EVENT.TOTAL_WAITS

2.7.68 System Stat Interval (PI_PIST)

Function

The System Stat Interval (PI_PIST) record stores metric information, taken at specific intervals, about sessions. Agent for Oracle creates one record for each metric information item. It provides this metric information about all sessions as information about the entire system. This is a multi-instance record.

Table 2.148 System Stat Interval (PI_PIST) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	50	
Log	No	
LOGIF	(Blank)	

Key Fields

Statistic # (STATISTIC_NUM)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 114 bytes

Table 2.149 System Stat Interval (PI_PIST) Fields

System Stat Interval (PI_PIST)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Class (CLASS)	Statistic class ^{#1}	string(20)	No	8.1	V\$SYSSTAT.CLASS
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PIST) ^{#1}	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector

System Stat Interval (PI_PIST)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Statistic # (STATISTIC_NUM)	Statistic number ^{#1}	double	No	All	V\$SYSSTAT.STATISTIC#
Statistic Name (NAME)	Statistic name ^{#1}	string(64)	No	All	V\$SYSSTAT.NAME
Value (VALUE)	Statistical value ^{#2}	double	Yes	All	V\$SYSSTAT.VALUE

2.7.69 System Stat Summary (PD)

Function

The System Stat Summary (PD) record stores performance data, taken at a specific point in time, indicating cumulative values from the start of the instance.

Table 2.150 System Stat Summary (PD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 1,114 bytes
- Variable part: 0 bytes

Table 2.151 System Stat Summary (PD) Fields

System Stat Summary (PD)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Block Changes/Tran (BLOCK_CHANGES_PER_TRANSACTION)	Rate at which each transaction executed database manipulation language (DML) statements	double	No	All	db block changes / user commits
Block Visits/Tran (BLOCK_VISITS_PER_TRANSACTION)	Number of times a work database was loaded per transaction	double	No	All	(db block gets + consistent gets) / user commits
Buffer Busy Wait % (BUFFER_BUSY_WAIT_PERCENTAGE)	Percentage ratio of buffer busy waits	double	No	All	(V\$SYSTEM_EVENT.TOTAL_WAITS where EVENT = 'buffer busy waits' / (consistent gets + db block

					gets)) * 100
Cache Hit % (CACHE_HIT_PERCENTAGE)	Percentage ratio of logical read operations	double	No	All	((db block gets + consistent gets) - physical reads) / (db block gets + consistent gets) * 100
Calls/Tran (CALLS_PER_TRANSACTION)	Rate at which client requests were executed per transaction	double	No	All	user calls / user commits
Changed Block % (CHANGED_BLOCK_PERCENTAGE)	Percentage ratio of difference between query and database manipulation language (DML) in the database application (this value changes according to the index and application usage)	double	No	All	(db block changes / (block gets + consistent gets)) * 100
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage ratio of extents used for consistency of application read operations	double	No	All	(consistent changes / consistent gets) * 100
Continued Row % (CONTINUED_ROW_PERCENTAGE)	Percentage ratio of continued rows (the value is close to 0 unless the application handles LONG columns)	double	No	All	(table fetch continued row / table fetch by rowid + table scan rows gotten) * 100
Current Logons (CURRENT_LOGONS)	Number of current logons at the Oracle database	long	No	All	V\$SYSSTAT.VALUE
Deadlocks (LOCK_DEADLOCKS)	Number of deadlocks caused by locked DDL processing	double	No	All	V\$SYSSTAT.VALUE
Dict Cache Get Misses % (DICTIONARY_CACHE_GET_MISSES_PERCENTAGE)	Percentage ratio of data requests issued due to cache miss	double	No	All	(SUM(V\$ROWCACHE.GETMISSES) / SUM(V\$ROWCACHE.GETS)) * 100
Disk Sorts (SORTS_DISK)	Number of disk sort operations	double	No	All	V\$SYSSTAT.VALUE
Free List Wait Events (FREE_LIST_WAIT_EVENTS)	Number of wait events in the free list	double	No	All	V\$WAITSTAT.COUNT where class = 'free list'
Lib Cache Miss % (LIBRARY_CACHE_MISS_PERCENTAGE)	Library cache hit rate (as the value of this field increases, the amount of	double	No	All	(SUM(V\$LIBRARYCACHE.RELOADS) / SUM(V\$LIBRARYCACHE.PINS)) * 100

	resources in use also increases)				100
Lock Conversions (LOCK_CONVERSIONS)	Number of enqueues (locks) whose mode changed such as from shared to lock	double	No	All	V\$SYSSTAT.VALUE
Lock Releases (LOCK_RELEASES)	Number of times enqueueing (locking) was released	double	No	All	V\$SYSSTAT.VALUE
Lock Requests (LOCK_REQUESTS)	Number of times enqueueing (locking) was requested	double	No	All	V\$SYSSTAT.VALUE
Lock Timeouts (LOCK_TIMEOUTS)	Number of times an enqueueing (locking) request was not permitted within the allocated time	double	No	All	V\$SYSSTAT.VALUE
Lock Waits (LOCK_WAITS)	Number of times an enqueueing (locking) request was placed in wait status (the difference between the enqueueing requests count and the enqueueing waits count is the number of times the request was not treated as an enqueueing request)	double	No	All	V\$SYSSTAT.VALUE
Logical Reads (LOGICAL_READS)	Number of logical read operations in read consistency mode and number of requests to the current copy of block	double	No	All	db block gets + consistent gets
Memory Sorts (SORTS_MEMORY)	Number of sort operations in memory	double	No	All	V\$SYSSTAT.VALUE
Non-Index Lookups % (NON_INDEX_LOOKUPS)	Percentage ratio of full table scans where no caching is performed	double	No	All	(table scans (long tables) / (table scans (short tables) + table scans (long tables))) * 100
Physical Reads (PHYSICAL_READS)	Number of physical read operations on database block from disk	double	No	All	V\$SYSSTAT.VALUE
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations onto disk by DBWR	double	No	All	V\$SYSSTAT.VALUE

Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PD)	string(4)	No	All	Agent Collector
Recursive Calls (RECURSIVE_CALLS)	Number of user calls processed	double	No	All	V\$SYSSTAT.VALUE
Recursive To User Call % (RECURSIVE_TO_USER_CALL_PERCENTAGE)	Correct values cannot be collected in this field. Percentage indicating overhead	double	No	All	(recursive calls / user calls) * 100
Redo Alloc Immediate % (REDO_ALLOC_IMMEDIATE_HIT_PERCENTAGE)	Success rate of immediately acquiring REDO allocation latch	double	No	All	(1 - (V\$LATCH.IMMEDIATE_MISSES / (V\$LATCH.IMMEDIATE_GETS + V\$LATCH.IMMEDIATE_MISSES))) * 100 where V\$LATCH.NAME = 'redo allocation'
Redo Alloc Willing to Wait % (REDO_ALLOC_WILLING_TO_WAIT_HIT_PERCENTAGE)	Success rate of acquiring REDO allocation latch from cache	double	No	All	(1 - (V\$LATCH.MISSES / V\$LATCH.GETS)) * 100 where name = 'redo allocation'
Redo Copy Immediate % (REDO_COPY_IMMEDIATE_HIT_PERCENTAGE)	Success rate of immediately acquiring REDO copy latch	double	No	All	(1 - (V\$LATCH.IMMEDIATE_MISSES / (V\$LATCH.IMMEDIATE_GETS + V\$LATCH.IMMEDIATE_MISSES))) * 100 where name = 'redo copy'
Redo Copy Willing to Wait % (REDO_COPY_WILLING_TO_WAIT_HIT_PERCENTAGE)	Success rate of acquiring REDO copy latch from cache	double	No	All	(1 - (V\$LATCH.MISSES / V\$LATCH.GETS)) * 100 where name = 'redo copy'
Redo Log Space Requests (REDO_LOG_SPACE_REQUESTS)	Number of times a user process waited for space in REDO log buffer	double	No	All	V\$SYSSTAT.VALUE
Redo Log Space Wait % (REDO_LOG_SPACE_WAIT_PERCENTAGE)	Whether or not memory allocation is appropriate	double	No	All	(redo log space requests / redo entries) * 100

Row Source % (ROW_SOURCE_PERCENTAGE)	Percentage ratio of rows obtained by full-table scan	double	No	All	(table scan rows gotten / (table fetch by rowid + table scan rows gotten)) * 100
Session CPU Usage (SESSION_CPU_USAGE)	CPU time used in 1/100 seconds	double	No	All	V\$SYSSTAT.VALUE
Session Cursor Cache Count (SESSION_CURSOR_CACHE_COUNT)	Number of cached session cursors (SESSION_CACHED_CURSORS in init.ora file specifies the maximum value of this field)	double	No	All	V\$SYSSTAT.VALUE
Session Cursor Cache Hit % (SESSION_CURSOR_CACHE_HIT_PERCENTAGE)	Hit rate of analysis calls in session's cursor cache	double	No	All	(session cursor cache hits / session cursor cache count) * 100
Session Cursor Cache Hits (SESSION_CURSOR_CACHE_HITS)	Number of times a cursor was found in the session's cursor cache by analysis call	double	No	All	V\$SYSSTAT.VALUE
Session PGA Memory (SESSION_PGA_MEMORY)	Size of PGA memory currently being used in bytes	double	No	All	V\$SYSSTAT.VALUE
Session UGA Memory (SESSION_UGA_MEMORY)	Size of used session memory in bytes	double	No	All	V\$SYSSTAT.VALUE
Sort Overflow % (SORT_OVERFLOW_PERCENTAGE)	Percentage ratio of sort operations using temporary segment	double	No	All	(sorts (disk) / (sorts (memory) + sorts (disk))) * 100
SQL Executing (SQL_EXECUTING)	This field is not supported. Number of current SQL executions	double	No	Unsupported	SUM(\$SQLAREA.USERS_EXECUTING)
SQL Net Bytes Rcvd (SQL_NET_BYTES_RECEIVED)	Amount of data received from client via SQL*Net	double	No	All	V\$SYSSTAT.VALUE
SQL Net Bytes Sent (SQL_NET_BYTES_SENT)	Amount of data sent to client via SQL*Net	double	No	All	V\$SYSSTAT.VALUE
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Sys Undo Blk Wait Events (SYSTEM_UNDO_BLOCK_WAIT_EVENTS)	Number of block wait events for system's rollback	double	No	All	V\$WAITSTAT.COUNT where class = 'system undo

	segment				block'
Sys Undo Hdr Wait Events (SYSTEM_UNDO_HEADER_WAIT_EVENTS)	Number of header block wait events for system's rollback segment	double	No	All	V\$WAITSTAT.COUNT where class = 'system undo header'
Total Logons (TOTAL_LOGONS)	Number of logons to the server	double	No	All	V\$SYSSTAT.VALUE
Total SQL Executions (TOTAL_SQL_EXECUTIONS)	Total number of SQL executions	double	No	All	execute count
Undo Blk Wait Events (UNDO_BLOCK_WAIT_EVENTS)	Number of block wait events for other rollback segments	double	No	All	V\$WAITSTAT.COUNT where class = 'undo block'
Undo Hdr Wait Events (UNDO_HEADER_WAIT_EVENTS)	Number of header block wait events for other rollback segments	double	No	All	V\$WAITSTAT.COUNT where class = 'undo header'
User Calls (USER_CALLS)	Number of user calls processed	double	No	All	V\$SYSSTAT.VALUE
User Calls / Parse (USER_CALLS_PER_PARSE)	Application management status in the context area	double	No	All	user calls / parse count (total)
User Commits (USER_COMMITS)	Number of transactions	double	No	All	V\$SYSSTAT.VALUE
User Rollback % (USER_ROLLBACK_PERCENTAGE)	Failure rate of application transactions	double	No	All	(user rollbacks / (user commits + user rollbacks)) * 100
User Rollbacks (USER_ROLLBACKS)	Number of rollbacks	double	No	All	V\$SYSSTAT.VALUE
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations	double	No	All	(physical writes / (physical reads + physical writes)) * 100

2.7.70 System Stat Summary Interval (PI)

Function

The System Stat Summary Interval (PI) record stores performance data, taken at specific intervals since the start of an instance, about key performance indicators.

Table 2.152 System Stat Summary Interval (PI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 1,930 bytes
- Variable part: 0 bytes

Table 2.153 System Stat Summary Interval (PI) Fields

System Stat Summary Interval (PI)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Block Changes/Tran (BLOCK_CHANGES_PER_TRANSACTION)	Rate at which each transaction executed database manipulation language (DML) statements ^{#2}	double	No	All	db block changes / user commits
Block Get/sec (BLOCK_GET_RATE)	Rate at which the application referenced database ^{#2}	double	No	All	(db block gets + consistent gets) / user commits
Block Visits/Tran (BLOCK_VISITS_PER_TRANSACTION)	Number of times a work database was loaded per transaction ^{#2}	double	No	All	(db block gets + consistent gets) / user commits

Buffer Busy Wait % (BUFFER_BUSY_WAIT_PERCENTAGE)	Percentage ratio of buffer busy waits#2	double	No	All	$(\forall \$SYSTEM_EVENT.TOTAL_WAITS \text{ where } EVENT = 'buffer \text{ busy waits}' / (\text{consistent gets} + \text{db block gets})) * 100$
Cache Hit % (CACHE_HIT_PERCENTAGE)	Percentage ratio of logical read operations#2	double	No	All	$((\text{db block gets} + \text{consistent gets}) - \text{physical reads}) / (\text{db block gets} + \text{consistent gets}) * 100$
Call/sec (CALL_RATE)	Work demand rate applied to the instance by all work resources#2	double	No	All	$\text{recursive calls} + \text{user calls} / \text{seconds in interval}$
Calls/Tran (CALLS_PER_TRANSACTION)	Rate at which client requests were executed per transaction (you can use the value of this field to detect a change in the application or the utilization status; this value may increase significantly when unique queries increase)#2	double	No	All	$\text{user calls} / \text{user commits}$
Changed Block % (CHANGED_BLOCK_PERCENTAGE)	Percentage ratio of difference between query and database manipulation language (DML) in the database application (this value changes according to the index and application usage)#2	double	No	All	$(\text{db block changes} / (\text{block gets} + \text{consistent gets})) * 100$
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage indicating the extents for which the application needed to check the consistency of read operations#2	double	No	All	$(\text{consistent changes} / \text{consistent gets}) * 100$
Continued Row % (CONTINUED_ROW_PERCENTAGE)	Percentage ratio of continued rows (the value is close to 0 unless the application handles LONG columns)#2	short	No	All	$(\text{table fetch continued row} / \text{table fetch by rowid} + \text{table scan rows gotten}) * 100$

Current Logons (CURRENT_LOGONS)	Number of current logons at the Oracle database#2	long	No	All	V\$SYSSTAT.VALUE
Deadlocks (LOCK_DEADLOCKS)	Number of deadlocks caused by locked DDL processing#2	double	Yes	All	V\$SYSSTAT.VALUE
Dict Cache Get Miss % (DICTIONARY_CACHE_GET_MISSES_PERCENTAGE)	Percentage ratio of data requests issued due to cache miss#2	double	No	All	(SUM(V\$ROWCACHE.GETMISSES) / SUM(V\$ROWCACHE.GETS)) * 100
Disk Sorts (SORTS_DISK)	Number of disk sort operations#2	double	Yes	All	V\$SYSSTAT.VALUE
Free List Wait Events (FREE_LIST_WAIT_EVENTS)	Number of wait events in the free list#2	double	Yes	All	V\$WAITSTAT.COUNT where class = 'free list'
I/O Ops/sec (IO_RATE)	Number of I/O operations per second#2	double	No	All	(physical reads + physical writes) / seconds in interval
Lib Cache Miss % (LIBRARY_CACHE_MISS_PERCENTAGE)	Library cache hit rate (as the value of this field increases, the amount of resources in use also increases)#2	double	No	All	(SUM(V\$LIBRARYCACHE.RELOADS) / SUM(V\$LIBRARYCACHE.PINS)) * 100
Lock Conversions (LOCK_CONVERSIONS)	Number of enqueues (locks) whose mode changed (such as from shared to lock)#2	double	Yes	All	V\$SYSSTAT.VALUE
Lock Hit % (LOCK_HIT_PERCENTAGE)	Percentage of the number of accesses to data blocks to the total number of data block accesses (this is applicable to accesses that do not involve lock conversion; it is also applicable to parallel servers only)#2	double	No	All	100 * (consistent gets - global lock converts (async)) / consistent gets
Lock Releases (LOCK_RELEASES)	Number of times enqueueing (locking) was released#2	double	Yes	All	V\$SYSSTAT.VALUE
Lock Requests (LOCK_REQUESTS)	Number of times enqueueing (locking) was requested#2	double	Yes	All	V\$SYSSTAT.VALUE

Lock Timeouts (LOCK_TIMEOUTS)	Number of times an enqueueing (locking) request was not permitted within the allocated time#2	double	Yes	All	V\$SYSSTAT.VALUE
Lock Waits (LOCK_WAITS)	Number of times enqueueing (locking) request was placed in wait status (the difference between the enqueueing requests count and the enqueueing waits count is the number of times the request was not treated as an enqueueing request)#2	double	Yes	All	V\$SYSSTAT.VALUE
Logical Reads (LOGICAL_READS)	Number of logical read operations in read consistency mode and the number of requests to the current copy of block#2	double	Yes	All	db block gets + consistent gets
Memory Sorts (SORTS_MEMORY)	Number of sort operations in memory#2	double	Yes	All	V\$SYSSTAT.VALUE
Non-Index Lookups % (NON_INDEX_LOOKUPS)	Percentage ratio of full table scans where no caching is performed#2	double	No	All	(table scans (long tables) / (table scans (short tables) + table scans (long tables))) * 100
Physical Reads (PHYSICAL_READS)	Number of physical read operations on database block from disk#2	double	Yes	All	V\$SYSSTAT.VALUE
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations onto disk by DBWR#2	double	Yes	All	V\$SYSSTAT.VALUE
Ping Write % (PING_WRITE_PERCENTAGE)	A large value means that lock conversion occurred frequently#2	double	No	All	100 * (DBWR cross instance writes) / physical writes
Read/sec (READ_RATE)	Number of read operations per second#2	double	No	All	physical reads / seconds in interval

Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record ^{#1}	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PI) ^{#1}	string (4)	No	All	Agent Collector
Recursive Calls (RECURSIVE_CALLS)	Number of user calls processed ^{#2}	double	Yes	All	V\$SYSSTAT.VALUE
Recursive To User Call % (RECURSIVE_TO_USER_CALL_PERCENTAGE)	Correct values cannot be collected in this field. Percentage indicating overhead ^{#2}	double	No	All	(recursive calls / user calls) * 100
Redo Alloc Immediate % (REDO_ALLOC_IMMEDIATE_HIT_PERCENTAGE)	Success rate of immediately acquiring REDO allocation latch ^{#2}	double	No	All	(1 - (V\$LATCH.IMMEDIATE_MISSES / (V\$LATCH.IMMEDIATE_GETS + V\$LATCH.IMMEDIATE_MISSES))) * 100 where V\$LATCH.NAME = 'redo allocation'
Redo Alloc Willing to Wait % (REDO_ALLOC_WILLING_TO_WAIT_HIT_PERCENTAGE)	Success rate of acquiring REDO allocation latch from cache ^{#2}	double	No	All	(1 - (V\$LATCH.MISSES / V\$LATCH.GETS)) * 100 where name = 'redo allocation'
Redo Copy Immediate % (REDO_COPY_IMMEDIATE_HIT_PERCENTAGE)	Success rate of immediately acquiring REDO copy latch ^{#2}	double	No	All	(1 - (V\$LATCH.IMMEDIATE_MISSES / (V\$LATCH.IMMEDIATE_GETS + V\$LATCH.IMMEDIATE_MISSES))) * 100 where V\$LATCH.NAME = 'redo copy'
Redo Copy Willing to Wait % (REDO_COPY_WILLING_TO_WAIT_HIT_PERCENTAGE)	Success rate of acquiring REDO copy latch from cache ^{#2}	double	No	All	(1 - (V\$LATCH.MISSES / V\$LATCH.GETS)) * 100 where name = 'redo copy'
Redo Log Space Requests (REDO_LOG_SPACE_REQUESTS)	Number of times a user process waited for space in REDO log buffer ^{#2}	double	Yes	All	V\$SYSSTAT.VALUE
Redo Log Space Wait % (REDO_LOG_SPACE_WAIT_PERCENTAGE)	Whether or not memory allocation is appropriate ^{#2}	double	No	All	(redo log space requests / redo entries) * 100

Row Source % (ROW_SOURCE_PERCENTAGE)	Percentage ratio of rows obtained by full-table scan#2	double	No	All	(table scan rows gotten / (table fetch by rowid + table scan rows gotten)) * 100
Session CPU Usage (SESSION_CPU_USAGE)	CPU time used in 1/100 seconds#2	double	Yes	All	V\$SYSSTAT.VALUE
Session Cursor Cache Count (SESSION_CURSOR_CACHE_COUNT)	Number of analysis calls for the session's cursor calls#2	double	Yes	All	V\$SYSSTAT.VALUE
Session Cursor Cache Hit % (SESSION_CURSOR_CACHE_HIT_PERCENTAGE)	Hit rate of analysis calls in session's cursor cache#2	double	No	All	(session cursor cache hits / session cursor cache count) * 100
Session Cursor Cache Hits (SESSION_CURSOR_CACHE_HITS)	Number of times a cursor was found in the session's cursor cache by analysis call#2	double	Yes	All	V\$SYSSTAT.VALUE
Session PGA Memory (SESSION_PGA_MEMORY)	Size of PGA memory currently being used in bytes#2	double	No	All	V\$SYSSTAT.VALUE
Session UGA Memory (SESSION_UGA_MEMORY)	Size of used session memory in bytes#2	double	No	All	V\$SYSSTAT.VALUE
Sort Overflow % (SORT_OVERFLOW_PERCENTAGE)	Percentage ratio of sort operations using temporary segment#2	double	No	All	(sorts (disk) / (sorts (memory) + sorts (disk))) * 100
SQL Executing (SQL_EXECUTING)	This field is not supported. Number of current SQL executions	double	No	Unsupported	SUM(\$SQLAREA.USERS_EXECUTING)
SQL Net Bytes Rcvd (SQL_NET_BYTES_RECEIVED)	Amount of data received from client via SQL*Net#2	double	Yes	All	V\$SYSSTAT.VALUE
SQL Net Bytes Sent (SQL_NET_BYTES_SENT)	Amount of data sent to client via SQL*Net#2	double	Yes	All	V\$SYSSTAT.VALUE
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Sys Undo Blk Wait Events (SYSTEM_UNDO_BLOCK_WAIT_EVENTS)	Number of block wait events for system's rollback segment#2	double	Yes	All	V\$WAITSTAT.COUNT where class = 'system undo block'

Sys Undo Hdr Wait Events (SYSTEM_UNDO_HEADER_WAIT_EVENTS)	Number of header block wait events for system's rollback segment#2	double	Yes	All	V\$WAITSTAT.COUNT where class = 'system undo header'
Total Logons (TOTAL_LOGONS)	Number of logons to the server#2	long	Yes	All	V\$SYSSTAT.VALUE
Total SQL Executions (TOTAL_SQL_EXECUTIONS)	Total number of SQL executions#2	double	Yes	All	execute count
Trans/sec (TRANSACTION_RATE)	Number of transactions per second#2	double	No	All	user commits / seconds in interval
Undo Blk Wait Events (UNDO_BLOCK_WAIT_EVENTS)	Number of block wait events for other rollback segments#2	double	Yes	All	V\$WAITSTAT.COUNT where class = 'undo block'
Undo Hdr Wait Events (UNDO_HEADER_WAIT_EVENTS)	Number of header block wait events for other rollback segments#2	double	Yes	All	V\$WAITSTAT.COUNT where class = 'undo header'
User Calls (USER_CALLS)	Number of user calls processed#2	double	Yes	All	V\$SYSSTAT.VALUE
User Calls / Parse (USER_CALLS_PER_PARSE)	Application management status in the context area#2	double	No	All	user calls / parse count (total)
User Commits (USER_COMMITS)	Number of transactions#2	double	Yes	All	V\$SYSSTAT.VALUE
User Rollback % (USER_ROLLBACK_PERCENTAGE)	Failure rate of application transactions#2	double	No	All	(user rollbacks / (user commits + user rollbacks)) * 100
User Rollbacks (USER_ROLLBACKS)	Number of rollbacks#2	double	Yes	All	V\$SYSSTAT.VALUE
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations#2	double	No	All	(physical writes / (physical reads + physical writes)) * 100
Writes/sec (WRITES_RATE)	Number of write operations per second#2	double	No	All	physical writes / seconds in interval

2.7.71 System Statistics (PD_PDST)

Function

The System Statistics (PD_PDST) record stores performance data indicating the status (at a specific point in time) of all sessions in the system. Agent for Oracle creates one record for each statistical value. This is a multi-instance record.

Table 2.154 System Statistics (PD_PDST) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	5	
Log	No	
LOGIF	(Blank)	

Key Fields

Statistic Name (NAME)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 96 bytes

Table 2.155 System Statistics (PD_PDST) Fields

System Statistics (PD_PDST)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Class (CLASS)	Statistic class	string(20)	No	8.1	V\$SYSSTAT.CLASS
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDST)	string(4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector

Statistic # (STATISTIC_NUM)	Statistic number	short	No	All	V\$SYSSTAT.STATISTIC#
Statistic Name (NAME)	Statistic name	string(64)	No	All	V\$SYSSTAT.NAME
Value (VALUE)	Statistical value	double	No	All	V\$SYSSTAT.VALUE

2.7.72 Table Access (PD_PDTA)

Function

The Table Access (PD_PDTA) record stores performance data indicating the status (at a specific point in time) of a table accessed by sessions during data collection. Agent for Oracle creates one record for each table accessed by sessions. This is a multi-instance record.

Table 2.156 Table Access (PD_PDTA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	130	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Object (OBJECT)

Lifetime

From the locking to the unlocking of an object

Record Size

- Fixed part: 678 bytes
- Variable part: 250 bytes

Table 2.157 Table Access (PD_PDTA) Fields

Table Access (PD_PDTA)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Object (OBJECT)	Object name	string(100)	No	All	V\$ACCESS.OBJECT
Owner (OWNER)	Object's owner	string(64)	No	All	V\$ACCESS.OWNER
Program (PROGRAM)	Name of program being executed	string(48)	No	All	V\$SESSION.PROGRAM where V\$ACCESS.SID = V\$SESSION.SID
Record Time	Collection termination time for the performance	time_t	No	All	Agent Collector

(RECORD_TIME)	data stored in the record				
Record Type (INPUT_RECORD_TYPE)	Record name (always PDTA)	string(4)	No	All	Agent Collector
SID (SID)	Number of sessions ID accessing the object whose name is set in the Object field	ulong	No	All	V\$ACCESS.SID where V\$ACCESS.SID = V\$SESSION.SID
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
User (USERNAME)	Oracle user name	string(30)	No	All	V\$SESSION.USERNAME where V\$ACCESS.SID = V\$ACCESS.SID

2.7.73 Tablespace (PD_PDTS)

Function

The Tablespace (PD_PDTS) record stores performance data indicating the status (at a specific point in time) of tablespaces in a database. Agent for Oracle creates one record for each tablespace in a database. This is a multi-instance record.

If the monitoring target is Oracle9i Database Release2 or later and Oracle's static data dictionary view `DBA_SEGMENTS_2` exists, Agent for Oracle refers to the `DBA_SEGMENTS_2` view instead of the `DBA_SEGMENTS` view when collecting the Tablespace (PD_PDTS) record.

To create the static data dictionary view `DBA_SEGMENTS_2`, you need to execute the `CATSPC2.SQL` script provided by Oracle.

Table 2.158 Tablespace (PD_PDTS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	3600	Yes
Collection Offset	30	
Log	No	
LOGIF	(Blank)	

Key Fields

Tablespace Name (`TABLESPACE_NAME`)

Lifetime

From the creation to the deletion of a tablespace

Record Size

- Fixed part: 678 bytes
- Variable part: 117 bytes

Table 2.159 Tablespace (PD_PDTs) Fields

Tablespace (PD_PDTs)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Blocks (BLOCKS)	Size of tablespace in Oracle blocks	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: SUM (DBA_DATA_FILES . BLOCKS) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: SUM (DBA_DATA_FILES . BLOCKS) ▪ For locally managed temporary tablespaces of Oracle8i or later: SUM (DBA_TEMP_FILES . BLOCKS)
Data Files (DATAFILES)	Number of data files in use by the tablespace	ushort	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: COUNT (DBA_DATA_FILE S) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: COUNT (DBA_DATA_FILE S) ▪ For locally managed temporary tablespaces of Oracle8i or later: COUNT (DBA_TEMP_FILE S)
Extents (EXTENTS)	Number of extents	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: SUM (DBA_SEGMENTS . EX TENTS) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: SUM (DBA_SEGMENTS . EX TENTS) ▪ For locally managed temporary tablespaces of Oracle8i or later:

					SUM (V\$SORT_SEGMENT . TOTAL_EXTENTS)
Free % (PERCENT_FREE)	Percentage ratio of free space. For locally managed temporary tablespaces, correct values cannot be collected in this field.	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $(\text{SUM}(\text{DBA_FREE_SPACE} . \text{BYTES}) / \text{DBA_DATA_FILES} . \text{BYTES}) * 100$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $(\text{SUM}(\text{DBA_FREE_SPACE} . \text{BYTES}) / \text{DBA_DATA_FILES} . \text{BYTES}) * 100$ ▪ For locally managed temporary tablespaces of Oracle8i or later: $(\text{SUM}(\text{V\\$TEMP_SPACE_HEADER} . \text{BYTES_FREE}) / (\text{DBA_TEMP_FILES} . \text{BYTES})) * 100$
Free Extents (FREE_EXTENTS)	Number of free extents. For locally managed temporary tablespaces, correct values cannot be collected in this field.	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: COUNT (DBA_FREE_SPACE) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: COUNT (DBA_FREE_SPACE) ▪ For locally managed temporary tablespaces of Oracle8i or later: COUNT (V\$TEMP_SPACE_HEADER)
Free Mbytes (FREE_BYTES)	Size of free space in megabytes. For locally managed temporary tablespaces, correct values cannot be collected in this field.	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $\text{SUM}(\text{DBA_FREE_SPACE} . \text{BYTES}) / (1024 * 1024)$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{DBA_FREE_SPACE} . \text{BYTES}) / (1024 * 1024)$ ▪ For locally managed

					temporary tablespaces of Oracle8i or later: $SUM(V\$\$TEMP_SPACE_HEADER.BYTES_FREE)) / (1024 * 1024)$
Increase % (PCT_INCREASE)	Default rate of increase in the extent size	short	No	All	DBA_TABLESPACES.PCT_INCREASE
Initial Extent (INITIAL_EXTENT)	Default size of initial extent	double	No	All	DBA_TABLESPACES.INITIAL_EXTENT
Max Extents (MAX_EXTENTS)	Default maximum number of extents	ulong	No	8.1	DBA_TABLESPACES.MAX_EXTENTS
Mbytes (BYTES)	Size of tablespace in megabytes	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $SUM(DBA_DATA_FILES.BYTES) / (1024 * 1024)$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $SUM(DBA_DATA_FILES.BYTES) / (1024 * 1024)$ ▪ For locally managed temporary tablespaces of Oracle8i or later: $SUM(DBA_TEMP_FILES.BYTES) / (1024 * 1024)$
Min Extents (MIN_EXTENTS)	Default minimum number of extents	long	No	All	DBA_TABLESPACES.MIN_EXTENT
Next Extent (NEXT_EXTENT)	Default size of secondary extent	double	No	8.1	DBA_TABLESPACES.NEXT_EXTENT
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDTS)	string (4)	No	All	Agent Collector
Segments (SEGMENTS)	Number of segments	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: COUNT(DBA_SEGMENTS) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later:

					COUNT (DBA_SEGMENTS) <ul style="list-style-type: none"> ▪ For locally managed temporary tablespaces of Oracle8i or later: COUNT (V\$SORT_SEGMENT)
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Tablespace status. Valid values are INVALID (tablespace was deleted), OFFLINE, and ONLINE.	string (9)	No	All	DBA_TABLESPACES STATUS
Tablespace Name (TABLESPACE_NAME)	Tablespace name	string (30)	No	All	DBA_TABLESPACES.TABLESPACE_NAME
Used Mbytes (USED_BYTES)	Size of used area in megabytes. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	double	No	All	(DBA_DATA_FILES.BYTES - DBA_FREE_SPACE.BYTES) / (1024 * 1024)

2.7.74 Tablespace Fragmentation (PD_PDTF)

Function

The Tablespace Fragmentation (PD_PDTF) record stores performance data indicating the status (at a specific point in time) of fragmentation of table spaces. Agent for Oracle creates one record for each tablespace in a database. This is a multi-instance record.

Table 2.160 Tablespace Fragmentation (PD_PDTF) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	135	
Log	No	
LOGIF	(Blank)	

Key Fields

Tablespace Name (TABLESPACE_NAME)

Lifetime

From the creation to the deletion of a tablespace

Record Size

- Fixed part: 678 bytes
- Variable part: 75 bytes

Table 2.161 Tablespace Fragmentation (PD_PDTF) Fields

Tablespace Fragmentation (PD_PDTF)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Avg Fragment (AVERAGE_FRAGMENT)	Average fragment size in bytes	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $(\text{SUM}(\text{FET}\\$. \text{LENGTH}) / \text{COUNT}(\text{FET}\\$)) * \text{DB_BLOCK_SIZE}$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{DBA_FREE_SPACE}.\text{BYTES}) / \text{COUNT}(\text{DBA_FREE_SPACE})$ where $\text{DBA_TABLESPACES}.\text{TABLESPACE_NAME} = \text{DBA_FREE_SPACE}.\text{TABLESPACE_NAME} (+)$ ▪ For locally managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{V}\\$\text{TEMP_SPACE_HEADER}.\text{BYTES_FREE}) / \text{COUNT}(\text{V}\\$\text{TEMP_SPACE_HEADER})$ where $\text{DBA_TEMP_FILES}.\text{FILE_ID} = \text{V}\\$\text{TEMP_SPACE_HEADER}.\text{FILE_ID} (+)$
Extents (EXTENTS)	Number of extents	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $\text{SUM}(\text{DBA_SEGMENTS}.\text{EXTENTS})$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{DBA_SEGMENTS}.\text{EXTENTS})$ ▪ For locally managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{V}\\$\text{SORT_SEGMENT}.\text{TOTAL_EXTENTS})$
Fragments (FRAGMENTS)	Number of fragments	ulong	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $\text{COUNT}(\text{FET}\\$)$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $\text{COUNT}(\text{DBA_FREE_SPACE})$ where $\text{DBA_TABLESPACES}.\text{TABLESPACE_NAME} = \text{DBA_FREE_SPACE}.\text{TABLESPACE_NAME} (+)$

					NAME (+) <ul style="list-style-type: none"> For locally managed temporary tablespaces of Oracle8i or later: COUNT (V\$TEMP_SPACE_HEADER) where DBA_TEMP_FILES.FILE_ID = V\$TEMP_SPACE_HEADER.FILE_I D(+)
High Max Extents (HIGH_MAX_EXTENTS)	Number of segments whose PCT_MAX_EXTENTS exceeds 90%	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier: COUNT (DBA_SEGMENTS) where EXTENTS > MAX_EXTENTS * 0.9 For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: COUNT (DBA_SEGMENTS) where EXTENTS > MAX_EXTENTS * 0.9 For locally managed temporary tablespaces of Oracle8i or later: COUNT (V\$SORT_SEGMENT) where EXTENT_SIZE > TOTAL_EXTENTS * 0.9
Largest Fragment (LARGEST_FRAGMENT)	Largest fragment size in bytes	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier: MAX (FET\$.LENGTH) * DB_BLOCK_SIZE For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: MAX (DBA_FREE_SPACE.BYTES) where DBA_TABLESPACES.TABLESPACE _NAME = DBA_FREE_SPACE.TABLESPACE_ NAME (+) For locally managed temporary tablespaces of Oracle8i or later: MAX (\$TEMP_SPACE_HEADER.BYTES_FREE) where DBA_TEMP_FILES.FILE_ID = V\$TEMP_SPACE_HEADER.FILE_I D(+)
Largest Fragment % (LARGEST_FRAGMENT_PERCENT)	Percentage ratio of tablespace in the largest fragment	double	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier: ((MAX (FET\$.LENGTH) * DB_BLOCK_SIZE) / SUM (DBA_DATA_FILES.BYTES)) * 100 For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: MAX (DBA_FREE_SPACE.BYTES)

					<p>/</p> <p>SUM(DBA_DATA_FILES.BYTES))</p> <p>* 100</p> <ul style="list-style-type: none"> For locally managed temporary tablespaces of Oracle8i or later: <p>(MAX(\$TEMP_SPACE_HEADER.BYTES_FREE) /</p> <p>SUM(DBA_TEMP_FILES.BYTES))</p> <p>* 100</p>
Next Alloc Fails (NEXT_ALLOC_FAILS)	Number of segments whose NEXT_EXTENT size is greater than the available fragment. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.	ulong	No	All	<p>COUNT(DBA_SEGMENTS) where</p> <p>NEXT_EXTENT ></p> <p>(MAX(DBA_FREE_SPACE.BYTES)</p> <p>where</p> <p>DBA_TABLESPACES.TABLESPACE_NAME =</p> <p>DBA_SEGMENTS.TABLESPACE_NAME</p> <p>)</p>
Overextended (OVEREXTENDED)	Number of segments with more than five extents	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier: <p>COUNT(DBA_SEGMENTS) where</p> <p>EXTENTS > 5</p> <ul style="list-style-type: none"> For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: <p>COUNT(DBA_SEGMENTS) where</p> <p>EXTENTS > 5</p> <ul style="list-style-type: none"> For locally managed temporary tablespaces of Oracle8i or later: <p>COUNT(V\$SORT_SEGMENT)</p> <p>where TOTAL_EXTENTS >5</p>
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDTF)	string (4)	No	All	Agent Collector
Segments (SEGMENTS)	Number of segments	ulong	No	All	<ul style="list-style-type: none"> For Oracle8 or earlier: <p>COUNT(DBA_SEGMENTS)</p> <ul style="list-style-type: none"> For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later:

					COUNT (DBA_SEGMENTS) <ul style="list-style-type: none"> ▪ For locally managed temporary tablespaces of Oracle8i or later: COUNT (V\$SORT_SEGMENT)
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Tablespace Name (TABLESPACE_NAME)	Tablespace name	string (30)	No	All	DBA_TABLESPACES.TABLESPACE_NAME

2.7.75 Tablespace Interval (PI_PITS)

Function

The Tablespace Interval (PI_PITS) record stores performance data, taken at specific intervals, about table spaces in a database. Agent for Oracle creates one record for each tablespace in a database. This is a multi-instance record.

Table 2.162 Tablespace Interval (PI_PITS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	3600	Yes
Collection Offset	50	
Log	No	
LOGIF	(Blank)	

Key Fields

Tablespace Name (TABLESPACE_NAME)

Lifetime

From the creation to the deletion of a tablespace

Record Size

- Fixed part: 678 bytes
- Variable part: 291 bytes

Table 2.163 Tablespace Interval (PI_PITS) Fields

Tablespace Interval (PI_PITS)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Datafiles (DATAFILES)	Number of data files in use by the tablespace#2	ushort	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: COUNT (DBA_DATA_FILES) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: COUNT (DBA_DATA_FILES) ▪ For locally managed temporary tablespaces of Oracle8i or later: COUNT (DBA_TEMP_FILES)
I/O Ops/sec (IO_RATE)	Number of I/O operations per second#2	double	No	All	(SUM (V\$FILESTAT.PHYRDS) + SUM (V\$FILESTAT.PHYWRTS)) / seconds in interval
Physical Blocks Read (PHYSICAL_BLOCKS_READ)	Number of physical blocks read#2	double	Yes	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: SUM (V\$FILESTAT.PHYBLKRD) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: SUM (V\$FILESTAT.PHYBLKRD) ▪ For locally managed temporary tablespaces of Oracle8i or later: SUM (V\$TEMPSTAT.PHYBLKRD)
Physical Blocks Written (PHYSICAL_BLOCKS_WRITTEN)	Number of physical blocks written#2	double	Yes	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: SUM (V\$FILESTAT.PHYBLKWRT) ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later:

					<p>SUM (V\$FILESTAT . PHY BLKWRT)</p> <ul style="list-style-type: none"> For locally managed temporary tablespaces of Oracle8i or later: <p>SUM (V\$TEMPSTAT . PHY BLKWRT)</p>
Physical Reads (PHYSICAL_READS)	Number of physical read operations that were completed#2	double	Yes	All	<ul style="list-style-type: none"> For Oracle8 or earlier: SUM (V\$FILESTAT . PHY RDS) For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: SUM (V\$FILESTAT . PHY RDS) For locally managed temporary tablespaces of Oracle8i or later: SUM (V\$TEMPSTAT . PHY RDS)
Physical Writes (PHYSICAL_WRITES)	Number of physical write operations that were completed#2	double	Yes	All	<ul style="list-style-type: none"> For Oracle8 or earlier: SUM (V\$FILESTAT . PHY WRTS) For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: SUM (V\$FILESTAT . PHY WRTS) For locally managed temporary tablespaces of Oracle8i or later: SUM (V\$TEMPSTAT . PHY WRTS)
Reads/sec (READ_RATE)	Number of read operations per second#2	double	No	All	SUM (V\$FILESTAT . PHYRDS) / seconds in interval
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PITS)#1	string (4)	No	All	Agent Collector
Rollback Segments (ROLLBACK_SEGMENTS)	Number of rollback segments. If an instance of Oracle9i or later is being monitored, performance data about the locally managed	ulong	No	All	COUNT (DBA_ROLLBACK_SEGS)

	temporary tablespace is not collected.#2				
Rollback Segments Hit % (ROLLBACK_SEGMENTS_HIT_PERCENTAGE)	Percentage ratio of HIT to GET. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.#2	double	No	All	$((\text{SUM}(\text{V}\$ROLLSTAT.GETS) - \text{SUM}(\text{V}\$ROLLSTAT.WAITS)) / \text{SUM}(\text{V}\$ROLLSTAT.GETS)) * 100$
Rollback Segments Trans (ROLLBACK_SEGMENTS_TRANS)	Number of transactions active during data collection. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.#2	long	No	All	$\text{SUM}(\text{V}\$ROLLSTAT.XACTS)$
Sort Segments (SORT_SEGMENTS)	Number of sort segments. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.#2	ulong	No	All	$\text{COUNT}(\text{V}\$SORT_SEGMENT)$
Sorting Users (SORTING_USERS)	Number of users active in the sort segment during data collection. If an instance of Oracle9i or later is being monitored, performance data about the locally managed temporary tablespace is not collected.#2	long	No	All	$\text{SUM}(\text{V}\$SORT_SEGMENT.CURRENT_USERS)$
Start Time (START_TIME)	Collection start time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Tablespace Name (TABLESPACE_NAME)	Tablespace name#1	string (30)	No	All	$\text{DBA_TABLESPACES.TABLESPACE_NAME}$
Write % (WRITE_PERCENTAGE)	Percentage ratio of write operations to all physical I/O devices#2	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $(\text{SUM}(\text{V}\\$FILESTAT.PHYWRTS) / (\text{SUM}(\text{V}\\$FILESTAT.PHYRDS) + \text{SUM}(\text{V}\\$FILESTAT.PHYWRTS))) * 100$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $(\text{SUM}(\text{V}\\$FILESTAT.PHYWRTS) / (\text{SUM}(\text{V}\\$FILESTAT.PHYRDS) + \text{SUM}(\text{V}\\$FILESTAT.PHYWRTS))) * 100$ ▪ For locally managed

					temporary tablespaces of Oracle8i or later: $(\text{SUM}(\text{V}\$\text{TEMPSTAT}.\text{PHYWRTS}) / \text{SUM}(\text{V}\$\text{TEMPSTAT}.\text{PHYWRTS}) + \text{SUM}(\text{V}\$\text{TEMPSTAT}.\text{PHYRDS})) * 100$
Writes/sec (WRITES_RATE)	Number of write operations per second#2	double	No	All	<ul style="list-style-type: none"> ▪ For Oracle8 or earlier: $\text{SUM}(\text{V}\\$\text{FILESTAT}.\text{PHYWRTS}) / \text{seconds in interval}$ ▪ For dictionary managed permanent tablespaces, locally managed permanent tablespaces, or dictionary managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{V}\\$\text{FILESTAT}.\text{PHYWRTS}) / \text{seconds in interval}$ ▪ For locally managed temporary tablespaces of Oracle8i or later: $\text{SUM}(\text{V}\\$\text{TEMPSTAT}.\text{PHYWRTS}) / \text{seconds in interval}$

2.7.76 Transaction (PD_PDTR)

Function

The Transaction (PD_PDTR) record stores performance data indicating the status (at a specific point in time) of transactions. Agent for Oracle creates one record for each transaction. This is a multi-instance record.

Table 2.164 Transaction (PD_PDTR) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	145	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Address (ADDRESS)

Lifetime

From the start to the end of a transaction

Record Size

- Fixed part: 678 bytes
- Variable part: 240 bytes

Table 2.165 Transaction (PD_PDTR) Fields

Transaction (PD_PDTR)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Address (ADDRESS)	Address of the transaction status object	string(16)	No	All	V\$TRANSACTION.ADDR
Cache Hit % (CACHE_HIT_PERCENTAGE)	Cache hit rate	double	No	All	$(V$TRANSACTION.LOG_IO - V$TRANSACTION.PHY_IO) / V$TRANSACTION.LOG_IO * 100$
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage indicating the extents used for consistency in transaction read	double	No	All	$(V$TRANSACTION.CR_CHANGE / V$TRANSACTION.CR_GET) * 100$

	operations				
Consistent Changes (CONSISTENT_CHANGES)	Number of consistent changes	double	No	All	V\$TRANSACTION.CR_CHANGE
Consistent Gets (CONSISTENT_GETS)	Number of consistent acquisitions	double	No	All	V\$TRANSACTION.CR_GET
Locks (LOCKS)	Number of transaction locks	double	No	All	COUNT(V\$LOCKED_OBJECT)
Logical I/O (LOGICAL_IO)	Logical I/O	double	No	All	V\$TRANSACTION.LOG_IO
No Undo (NO_UNDO)	Identifier of a non-UNDO transaction (if this is a non-UNDO transaction, the value of this field is Yes; otherwise, the value is No)	string(3)	No	All	V\$TRANSACTION.NOUNDO
Physical I/O (PHYSICAL_IO)	Physical I/O	double	No	All	V\$TRANSACTION.PHY_IO
Previous XID (PREVIOUS_XID)	Parent transaction ID	string(30)	No	All	V\$TRANSACTION.PRIV_XIDUSN + V\$TRANSACTION.PRIV_XIDSLT + V\$TRANSACTION.PRIV_XIDSQN
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDTR)	string(4)	No	All	Agent Collector
Recursive (RECURSIVE)	Identifier of a recursive transaction (if this is a recursive transaction, the value of this field is Yes; otherwise, the value is No)	string(3)	No	All	V\$TRANSACTION.RECURSIVE
SID (SID)	Session ID	ulong	No	All	V\$SESSION.SID where V\$TRANSACTION.SES_ADDR = V\$SESSION.ADDR
Space (SPACE)	Identifier of a space transaction (if this is a space transaction, the value of this field is Yes; otherwise, the value is No)	string(3)	No	All	V\$TRANSACTION.SPACE

Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Transaction status	string(16)	No	All	V\$TRANSACTION.STATUS
Tran Secs (TRANS_SECS)	Number of seconds since the start time	ulong	No	All	V\$TRANSACTION.START_TIME
Tran Start (TRANS_START)	Start time	string(20)	No	All	V\$TRANSACTION.START_TIME
Used Undo Blocks (USED_UNDO_BLOCKS)	Number of UNDO blocks used	double	No	All	V\$TRANSACTION.USED_BLOCK
Used Undo Records (USED_UNDO_RECORDS)	Number of UNDO records used	double	No	All	V\$TRANSACTION.USED_RECORD
User (USERNAME)	Oracle user name	string(30)	No	All	V\$SESSION.USERNAME
XID (XID)	UNDO segment number, slot number, and sequence number (this field is not applicable to an inactive transaction)	string(30)	No	All	V\$TRANSACTION.XIDUSN + V\$TRANSACTION.XIDSLOT + V\$TRANSACTION.XIDSQN

2.7.77 Transaction Interval (PI_PITR)

Function

The Transaction Interval (PI_PITR) record stores performance data, taken at specific intervals, about transactions. Agent for Oracle creates one record for each transaction. This is a multi-instance record.

Table 2.166 Transaction Interval (PI_PITR) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	145	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- Address (ADDRESS)

Lifetime

From the start to the end of a transaction

Record Size

- Fixed part: 678 bytes
- Variable part: 348 bytes

Table 2.167 Transaction Interval (PI_PITR) Fields

Transaction Interval (PI_PITR)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Address (ADDRESS)	Address of the transaction status object ^{#1}	string(16)	No	All	V\$TRANSACTION .ADDR
Cache Hit % (CACHE_HIT_PERCENTAGE)	Cache hit rate ^{#2}	double	No	All	((V\$TRANSACTION.LOG_IO - V\$TRANSACTION.PHY_IO) / V\$TRANSACTION.LOG_IO) * 100
Consistent Change % (CONSISTENT_CHANGE_PERCENTAGE)	Percentage indicating the extents used for consistency in transaction read	double	No	All	(V\$TRANSACTION.CR_CHANGE / V\$TRANSACTION.CR_GET) *

	operations#2				100
Consistent Changes (CONSISTENT_CHANGES)	Number of consistent changes#2	double	Yes	All	V\$TRANSACTION .CR_CHANGE
Consistent Gets (CONSISTENT_GETS)	Number of consistent acquisitions#2	double	Yes	All	V\$TRANSACTION .CR_GET
Locks (LOCKS)	Number of locks caused by the transaction#2	double	Yes	All	COUNT(V\$LOCKED_OBJECT)
Logical I/O (LOGICAL_IO)	Logical I/O#2	double	Yes	All	V\$TRANSACTION .LOG_IO
No Undo (NO_UNDO)	Identifier of a non-UNDO transaction (if this is a non-UNDO transaction, the value of this field is Yes; otherwise, the value is No)#1	string(3)	No	All	V\$TRANSACTION .NOUNDO
Physical I/O (PHYSICAL_IO)	Physical I/O#2	double	Yes	All	V\$TRANSACTION .PHY_IO
Previous XID (PREVIOUS_XID)	Parent transaction ID#1	string(30)	No	All	V\$TRANSACTION .PRV_XIDUSN + V\$TRANSACTION .PRV_XIDSLT + V\$TRANSACTION .PRV_XIDSQN
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record#1	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PITR)#1	string(4)	No	All	Agent Collector
Recursive (RECURSIVE)	Identifier of a recursive transaction (if this is a recursive transaction, the value of this field is Yes; otherwise, the value is No)#1	string(3)	No	All	V\$TRANSACTION .RECURSIVE
SID (SID)	Session ID#1	ulong	No	All	V\$SESSION.SID where V\$TRANSACTION .SES_ADDR = V\$SESSION.ADDR
Space (SPACE)	Identifier of a space transaction (if this is a space transaction, the value of this field is Yes; otherwise, the value is No)#1	string(3)	No	All	V\$TRANSACTION .SPACE
Start Time	Collection start time for the performance	time_t	No	All	Agent Collector

(START_TIME)	data stored in the record ^{#1}				
Status (STATUS)	Transaction status ^{#1}	string(16)	No	All	V\$TRANSACTION .STATUS
Tran Secs (TRANS_SECS)	Number of seconds since the start time ^{#1}	ulong	No	All	V\$TRANSACTION .START_TIME
Tran Start (TRANS_START)	Start time ^{#1}	string(20)	No	All	V\$TRANSACTION .START_TIME
Used Undo Blocks (USED_UNDO_BLOCKS)	Number of UNDO blocks used ^{#2}	double	Yes	All	V\$TRANSACTION .USED_UBLK
Used Undo Records (USED_UNDO_RECORDS)	Number of UNDO records used ^{#2}	double	Yes	All	V\$TRANSACTION .USED_UREC
User (USERNAME)	Oracle user name ^{#1}	string(30)	No	All	V\$SESSION.USE RNAME
XID (XID)	UNDO segment number, slot number, and sequence number (this field is not applicable to an inactive transaction) ^{#1}	string(30)	No	All	V\$TRANSACTION .XIDUSN + V\$TRANSACTION .XIDSLOT + V\$TRANSACTION .XIDSQN

2.7.78 Transaction Lock (PD_PDTL)

Function

The Transaction Lock (PD_PDTL) record stores performance data indicating the status (at a specific point in time) of transaction locks. Agent for Oracle creates one record for each lock held by each transaction. This is a multi-instance record.

Table 2.168 Transaction Lock (PD_PDTL) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	140	
Log	No	
LOGIF	(Blank)	

Key Fields

XID (XID)

Lifetime

From the locking to the unlocking of an object

Record Size

- Fixed part: 678 bytes
- Variable part: 180 bytes

Table 2.169 Transaction Lock (PD_PDTL) Fields

Transaction Lock (PD_PDTL)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Locked Mode (LOCKED_MODE)	Lock mode	string(20)	No	All	V\$LOCKED_OBJECT.LOCKED_MODE
Object Name (OBJECT_NAME)	Name of the locked object	string(30)	No	All	DBA_OBJECTS.OBJECT_NAME where DBA_OBJECTS.OBJECT_ID = V\$LOCKED_OBJECT.OBJECT_ID
Object Type (OBJECT_TYPE)	Object type	string(30)	No	All	DBA_OBJECTS.OBJECT_TYPE where DBA_OBJECTS.OBJECT_ID = V\$LOCKED_OBJECT.OBJECT_ID
Owner (OWNER)	Object's owner	string(30)	No	All	DBA_OBJECTS.OWNER where DBA_OBJECTS.OBJECT_ID = V\$LOCKED_OBJECT.OBJECT_ID
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDTL)	string(4)	No	All	Agent Collector
SID (SID)	Session ID	ulong	No	All	V\$LOCKED_OBJECT.SESSIO N_ID
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
User (USER_NAME)	Oracle user name	string(30)	No	All	V\$LOCKED_OBJECT.ORACLE_USERNAME
XID (XID)	Undo segment number, slot number, and sequence number	string(30)	No	All	V\$LOCKED_OBJECT.XIDUSN + V\$LOCKED_OBJECT.XIDSLOT + V\$LOCKED_OBJECT.XIDSQN

2.7.79 Version (PD_PDV)

Function

The Version (PD_PDV) record stores performance data, taken at a specific point in time, indicating the version number of a core component at the Oracle server. Agent for Oracle creates one record for each core component. This is a multi-instance record.

Table 2.170 Version (PD_PDV) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	600	Yes
Collection Offset	150	
Log	No	
LOGIF	(Blank)	

Key Fields

Component (COMPONENT)

Lifetime

From the creation to the deletion of an Oracle instance

Record Size

- Fixed part: 678 bytes
- Variable part: 195 bytes

Table 2.171 Version (PD_PDV) Fields

Version (PD_PDV)					
View Name (Manager Name)	Description	Format	Delta	Supported Version	Data Source
Component (COMPONENT)	Component name	string (64)	No	All	PRODUCT_COMPONENT_VERSION. PRODUCT
Record Time (RECORD_TIME)	Collection termination time for the performance data stored in the record	time_t	No	All	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name (always PDV)	string (4)	No	All	Agent Collector
Start Time (START_TIME)	Collection start time for the performance data stored in the record	time_t	No	All	Agent Collector
Status (STATUS)	Component status	string (64)	No	All	PRODUCT_COMPONENT_VERSION. STATUS
Version (VERSION)	Component's version number	string (64)	No	All	PRODUCT_COMPONENT_VERSION. VERSION

2.7.80 Reserved and Unavailable Records

The following records are reserved and unavailable:

- Ping Activity Interval (PI_PIPP)
- Database Link (PD_PDDL)
- SQL*Net Handler (PD_PDNH)

2.8 Agent for Microsoft SQL Server Records

Table 2.172 lists the records that can be collected by the Agent for Microsoft SQL Server and the information that is stored in each record.

Table 2.172 Agent for Microsoft SQL Server Records

Record Name	Record ID	Information Stored in Record
Config Detail	PD_CD	Information related to Microsoft SQL Server environment setting option
Database Detail	PD_DD	Database information (snapshot), such as the numbers of locks and processes related to a particular database
Database Interval	PI_DI	Interval information, such as the status related to a particular database
Database Replication Detail	PD_RD	Replication information of a particular database
Database Space Detail	PD_DS	Information related to the size of the disk space used by a particular database
Errorlog Error Detail	PD_EE	Detailed information related to the errors that occurred in Microsoft SQL Server
Errorlog Summary Detail	PD_ES	Summary of the errors that occurred in Microsoft SQL Server
Errorlog Summary Interval	PI_ESI	This record is reserved and cannot be used.
Generic Data Detail	PD_GEND	This record is reserved and cannot be used.
Generic Data Interval	PI_GENI	This record is reserved and cannot be used.
Global Server Summary	PI	Information related to Microsoft SQL Server I/O, network, and so on.
Job History Detail	PD_JH	Job history information incorporated into the Microsoft SQL Server schedule
Licensing Detail	PD_LIC	Licensing information, such as the maximum number of Microsoft SQL Server connections allowed
Lock Detail	PD_LD	Detailed information related to database locks
Procedure Cache Detail	PD_PCAC	Information related to procedure cache
Process Detail	PD_PDET	Detailed information on a particular database process, such as locks and I/O
Replication Published Database Overview	PI_RPDB	Replication information related to database distribution transactions, and so on.
Replication Summary Detail	PD_RS	Summary of database replication generated by Microsoft SQL Server
Restore History Detail	PD_RH	This record is reserved and cannot be used.
Server Detail	PD	Detailed information on Microsoft SQL Server, such as locks and I/O

Record Name	Record ID	Information Stored in Record
Server Locks Detail	PD_LOCK	Information related to Microsoft SQL Server locks
Server Overview	PI_SERV	Overall information related to Microsoft SQL Server, such as the rate of cache hits and I/O
Server Space Detail	PD_SS	Information related to the size of the disk space used by Microsoft SQL Server
Server Space Interval	PI_SI	Interval information related to the size of the disk space used by Microsoft SQL Server
SQL Text	PD_SQL	This record displays the execution information on the last query issued by the process.
SQL Text - Performance-Based	PD_PDES	This record is reserved and cannot be used.
Transaction Log Overview	PI_TLOG	Information related to transaction log space
User-Defined Counter Overview	PI_UCTR	Information related to each user-defined counter
User Process Detail	PD_USER	Information related to each logged-on user

2.8.1 Config Detail (PD_CD)

Function

The Config Detail (PD_CD) record indicates information related to Microsoft SQL Server environment setting options. One record is created for each environment setting option. This is a multi-instance record.

Table 2.173 Config Detail (PD_CD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

Name (NAME)

Lifetime

From the time a Microsoft SQL Server instance is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 157 bytes

Table 2.174 Config Detail (PD_CD) Fields

Config Detail (PD_CD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Config Value (CONFIG_VALUE)	Environment setting option value	long	No	sp_configure.config_value
Current Run Value (RUN_VALUE)	Environment setting option value (execution value at data collection)	long	No	sp_configure.run_value
Max Value (MAXIMUM)	Maximum value of environment setting option	long	No	sp_configure.maximum
Min Value (MINIMUM)	Minimum value of environment setting option	long	No	sp_configure.minimum
Name (NAME)	Name of environment setting option	string(141)	No	sp_configure.name
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always CD)	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector

2.8.2 Database Detail (PD_DD)

Function

The Database Detail (PD_DD) record indicates database information (snapshot), such as the numbers of locks and processes, related to a particular database. One record is created for each database. This is a multi-instance record.

Table 2.175 Database Detail (PD_DD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- DB Name (DB_NAME)
- DBID (DBID)

Lifetime

From the time the database is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 1362 bytes

Table 2.176 Database Detail (PD_DD) Fields

Database Detail (PD_DD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Availability (AVAILABILITY)	Database status. The following values are valid: Active Enabled. Process is running. Available Enabled. No process is running. NOT Available A crash or problem may have occurred during loading, and as a result the database cannot be opened or used in its current state. Restricted Database can be used only by its owner or a single user.	string(16)	No	master..sysdatabases.status
Blocked Processes (BLOCKED)	Number of blocked processes	word	No	Total number of processes whose master..sysprocesses.blocked is not 0
Blocking Locks (BLOCKING)	Number of blocking locks	ulong	No	Total number of locks whose master..syslockinfo.req_status value is 3 (standby)
Create Date (CREATE_DATE)	Database creation date	time_t	No	master..sysdatabases.crdate
DB Name (DB_NAME)	Database name	string(257)	No	master..sysdatabases.name
DB Owner (DBO)	Database owner	string(513)	No	User name for whom master..sysdatabases.sid = master..syslogins.sid
DBID (DBID)	Database ID	word	No	master..sysdatabases.dbid
Demand Locks (DEMAND)	Number of request locks	ulong	No	master..syslockinfo
Exclusive Intent Locks (EXCLUSIVE_INTENT)	Number of exclusive intent locks	ulong	No	master..syslockinfo
Exclusive Page Locks (EXCLUSIVE_PAGE)	Number of exclusive page locks	ulong	No	master..syslockinfo

Database Detail (PD_DD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Exclusive Table Locks (EXCLUSIVE_TABLE)	Number of exclusive table locks	ulong	No	master..syslockinfo
Last Dump Date (LAST_DUMP)	Last dump date for the transaction log	time_t	No	msdb.dbo.backupset
Locks (LOCKS)	Total number of locks	ulong	No	master..syslockinfo
Options (OPTIONS)	Database options currently specified. Delimited by commas.	string(512)	No	master..sysdatabases.status, master..sysdatabases.status2
Other Processes (OTHER)	Number of other types of processes	word	No	master..sysprocesses.status
Process Count (PROCESSES)	Total number of processes	word	No	master..sysprocesses
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always DD)	char(8)	No	Agent Collector
Runnable Processes (RUNNABLE)	Number of executable processes	word	No	master..sysprocesses.status
Running Processes (RUNNING)	Number of processes being executed	word	No	master..sysprocesses.status
Shared Intent Locks (SHARED_INTENT)	Number of shared intent locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Shared Page Locks (SHARED_PAGE)	Number of shared page locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Shared Table Locks (SHARED_TABLE)	Number of shared table locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Sleeping Processes (SLEEPING)	Number of sleeping processes	word	No	master..sysprocesses.status
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Update Page Locks (UPDATE_PAGE)	Number of update page locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode

Database Detail (PD_DD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Version (VERSION)	Microsoft SQL Server version used for database creation	word	No	master..sysdatabases.version

2.8.3 Database Interval (PI_DI)

Function

The Database Interval (PI_DI) record indicates interval information, such as the status related to a particular database. One record is created for each database. This is a multi-instance record.

Table 2.177 Database Interval (PI_DI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- DB Name (DB_NAME)
- DBID (DBID)

Lifetime

From the time the database is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 1376 bytes

Table 2.178 Database Interval (PI_DI) Fields

Database Interval (PI_DI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Availability (AVAILABILITY)	Database status. The following values are valid:#1 Active Enabled. Process is running. Available Enabled. No process is running. NOT Available A crash or problem may have occurred during loading, and as a result the database cannot be opened or used in its current state. Restricted Database can be used only by its owner or a single user.	string(16)	No	master..sysdatabases.status
DB Name (DB_NAME)	Database name#1	string(257)	No	master..sysdatabases.name
DB Owner (DBO)	Database owner#1	string(513)	No	User's logon ID for which master..sysdatabases.sid = master..syslogins.sid
DBID (DBID)	Database ID#1	word	No	master..sysdatabases.dbid
Data Growth % (DATA_GROWTH)	Rate of increase of data space during the interval#2	double	No	Each database's sysindexes table
Index Growth % (IDX_GROWTH)	Rate of increase of index space during the interval#2	double	No	Each database's sysindexes table
Log Growth % (LOG_GROWTH)	Rate of increase of log space during the interval#2	double	No	DBCC SQLPERF (LOGSPACE)
Options (OPTIONS)	Database options currently specified. Delimited by commas.#1	string(512)	No	master..sysdatabases.status, master..sysdatabases.status2
Record Time (RECORD_TIME)	Interval end time (GMT format)#1	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always DI)#1	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format)#1	time_t	No	Agent Collector

Database Interval (PI_DI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Tran Log Dumps (DUMPED_TRAN)	Number of transaction log dumps collected during the relevant interval#2	long	Yes	msdb.dbo.backupset

2.8.4 Database Replication Detail (PD_RD)

Function

The Database Replication Detail (PD_RD) record indicates replication information of a particular database. One record is created for each replication of the database. This is a multi-instance record.

As indicated in the following table, the field that can be acquired for this record differs depending on the database type.

Table 2.179 Database Replication Detail (PD_RD) Fields that Can Be Acquired

Field	Database type		
	Publisher	Distributor	Subscriber and others
Articles	Yes	No	No
Publications	Yes	No	No
Subscriptions	Yes	No	No
None of the above	Yes	Yes	Yes

When a field cannot be acquired, the value is 0.

Table 2.180 Database Replication Detail (PD_RD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

DBID (DBID)

Lifetime

From the time the database is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 271 bytes

Table 2.181 Database Replication Detail (PD_RD) Fields

Database Replication Detail (PD_RD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Articles (ARTICLES)	Number of articles published by the database	ulong	No	Each publication database's sysarticles table
DB Name (DB_NAME)	Database name	string(257)	No	master..sysdatabases.name
DBID (DBID)	Database ID	word	No	master..sysdatabases.dbid
Publications (PUBLICATIONS)	Number of publications posted by the publishing server	ulong	No	Each publication database's syspublications table
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always RD)	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Subscriptions (SUBSCRIPTIONS)	Number of database subscriptions	ulong	No	Each publication database's syssubscriptions table

2.8.5 Database Space Detail (PD_DS)

Function

The Database Space Detail (PD_DS) record indicates information related to the size of the disk space used by a particular database. One record is created for each database. This is a multi-instance record.

Table 2.182 Database Space Detail (PD_DS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- DB Name (DB_NAME)
- DBID (DBID)

Lifetime

From the time the database is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 331 bytes

Table 2.183 Database Space Detail (PD_DS) Fields

Database Space Detail (PD_DS)				
View Name (Manager Name)	Description	Format	Delta	Data Source
DB Name (DB_NAME)	Database name	string(257)	No	master..sysdatabases.name
DB Size (SIZE)	Database size (in megabytes)	double	No	sp_databases.db_size
DBID (DBID)	Database ID	word	No	master..sysdatabases.dbid
Data Mbytes (DATA)	Size of the data space being used (in megabytes)	double	No	Each database's sysindexes table
Free % (PERC_FREE)	Percentage of unallocated space relative to the size of the entire database containing data files and transaction log files	double	No	Each database's sysindexes table, sp_databases.db_size
Free Mbytes (FREE_SPACE)	Size of unallocated space relative to the size of the entire database containing data files and transaction log files (in megabytes)	double	No	Each database's sysindexes table, sp_databases.db_size
Index Mbytes (IDX)	Size of index space being used (in megabytes)	double	No	Each database's sysindexes table
Log Mbytes (LOG)	Size of log space being used (in megabytes)	double	No	DBCC SQLPERF (LOGSPACE)
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always DS)	char(8)	No	Agent Collector
Rsvd Mbytes (RESERVED)	Size of space already allocated (in megabytes)	double	No	Each database's sysindexes table
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Unused % (PERC_USED)	Percentage of allocated but unused space relative to allocated space	double	No	Each database's sysindexes table
Unused Mbytes (UNUSED)	Size of allocated but unused space (in megabytes)	double	No	Each database's sysindexes table

2.8.6 Errorlog Error Detail (PD_EE)

Function

The Errorlog Error Detail (PD_EE) record contains detailed information related to the errors that occurred in Microsoft SQL Server. One record is created for each error recorded in the error log. This is a multi-instance record.

Table 2.184 Errorlog Error Detail (PD_EE) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- Count (COUNT)
- Error # (ERROR)
- Error Time (ERROR_TIME)
- Error Time Msec (ERROR_TIME_MSEC)
- Severity (ERROR_SEVERITY)

Lifetime

From the time the error log file is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 348 bytes

Table 2.185 Errorlog Error Detail (PD_EE) Fields

Errorlog Error Detail (PD_EE)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Count (COUNT)	Serial numbers assigned by the Agent for Microsoft SQL Server to errors that occur at the same time	word	No	Microsoft SQL Server error log
Error # (ERROR)	Error number	long	No	Microsoft SQL Server error log
Error Time (ERROR_TIME)	Error occurrence time	time_t	No	Microsoft SQL Server error log
Error Time Msec (ERROR_TIME_MSEC)	Millisecond portion of the error occurrence time	word	No	Microsoft SQL Server error log
Message (MESSAGE)	Error message character string. Characters beyond the 300-byte length are discarded.	string(300)	No	Microsoft SQL Server error log
Process (PROCESS)	Error location (process name)	string(32)	No	Microsoft SQL Server error log
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always EE)	char(8)	No	Agent Collector
Severity (ERROR_SEVERITY)	Error message severity level	word	No	Microsoft SQL Server error log
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
State (STATE)	Error message state code	word	No	Microsoft SQL Server error log

2.8.7 Errorlog Summary Detail (PD_ES)

Function

The Errorlog Summary Detail (PD_ES) record indicates a summary of the errors that occurred in Microsoft SQL Server. Only one record is created.

Table 2.186 Errorlog Summary Detail (PD_ES) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time the error log file is created until the time it is deleted

Record Size

- Fixed part: 701 bytes
- Variable part: 0 bytes

Table 2.187 Errorlog Summary Detail (PD_ES) Fields

Errorlog Summary Detail (PD_ES)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Errorlog Errors (ERRORLOG_ERRORS)	Total number of errors recorded in the error log	ulong	No	Microsoft SQL Server error log
Fatal Errors (FATAL_ERRORS)	Total number of fatal errors recorded in the error log	ulong	No	Microsoft SQL Server error log
Internal Errors (INTERNAL_ERRORS)	Total number of internal errors recorded in the error log	ulong	No	Microsoft SQL Server error log
Last Error Time (LAST_ERROR)	Time at which the last error occurred	time_t	No	Microsoft SQL Server error log
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always ES)	char(8)	No	Agent Collector
Resource Errors (RESOURCE_ERRORS)	Total number of resource errors recorded in the error log	ulong	No	Microsoft SQL Server error log
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector

2.8.8 Global Server Summary (PI)

Function

The Global Server Summary (PI) record indicates information related to the Microsoft SQL Server I/O and network. Only one record is created.

Table 2.188 Global Server Summary (PI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time Microsoft SQL Server instance starts until the time it stops

Record Size

- Fixed part: 1,100 bytes
- Variable part: 0 bytes

Table 2.189 Global Server Summary (PI) Fields

Global Server Summary (PI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Cache Avg Scan (CACHE_AVG_SCAN)	This field is reserved and cannot be used.	--	--	--
Conns (CONNECTIONS)	Number of client connections#2	ulong	No	@@connections
CPU % (PERC_BUSY)	Percentage of time CPU is busy#2	double	No	CPU_BUSY / (CPU_BUSY + IDLE + IO_BUSY) * 100
CPU Time (CPU_TIME)	CPU busy time#2	utime	Yes	@@cpu_busy / 1000
CPU Timeticks (CPU_BUSY)	CPU usage time (in ticks)	ulong	Yes	@@cpu_busy * 1000 / @@timeticks

Global Server Summary (PI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
I/O % (PERC_IO)	Percentage of CPU time spent for I/O ^{#2}	double	No	IO_BUSY / (CPU_BUSY + IDLE + IO_BUSY) * 100
I/O Time (IO_TIME)	CPU time spent for I/O ^{#2}	utime	Yes	@@io_busy / 1000
I/O Timeticks (IO_BUSY)	CPU I/O time (in ticks)	ulong	Yes	@@io_busy * 1000 / @@timeticks
Idle % (PERC_IDLE)	Percentage of time CPU is idle ^{#2}	double	No	IDLE / (CPU_BUSY + IDLE + IO_BUSY) * 100
Idle Time (IDLE_TIME)	CPU idle time ^{#2}	utime	Yes	@@idle / 1000
Idle Timeticks (IDLE)	CPU idle time (in ticks)	ulong	Yes	@@idle * 1000 / @@timeticks
Lazy Writes/sec (LAZY_WRITES_SEC)	Number of pages per second flushed by Lazy Writer to a disk within an interval (1 page equals 8 kilobytes) ^{#2}	double	No	master..sysperinfo
Log Writes/sec (LOG_WRITES_SEC)	Number of log pages per second written onto a disk within an interval ^{#2}	double	No	master..sysperinfo
Net Queue (NET_QUEUE)	This field is reserved and cannot be used.	--	--	--
Net Reads/sec (NET_READS_SEC)	This field is reserved and cannot be used.	--	--	--
Net Writes/sec (NET_WRITES_SEC)	This field is reserved and cannot be used.	--	--	--
Pkt Errors (PACKET_ERRORS)	Number of packet errors ^{#2}	ulong	Yes	@@packet_errors
Pkts Rcvd (PACK_RECEIVED)	Number of packets received ^{#2}	ulong	Yes	@@pack_received
Pkts Sent (PACK_SENT)	Number of packets sent ^{#2}	ulong	Yes	@@pack_sent
Reads Pending (READS_PENDING)	This field is reserved and cannot be used.	--	--	--
Record Time (RECORD_TIME)	Interval end time (GMT format) ^{#1}	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always PI) ^{#1}	char(8)	No	Agent Collector

Global Server Summary (PI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Start Time (START_TIME)	Interval start time (GMT format) ^{#1}	time_t	No	Agent Collector
Timeticks (TIMETICKS)	Microseconds per tick ^{#1}	ulong	No	@@timeticks
Total Errors (TOTAL_ERRORS)	Number of disk errors ^{#2}	ulong	Yes	@@total_errors
Total Reads (TOTAL_READ)	Number of disk read operations ^{#2}	ulong	Yes	@@total_read
Total Writes (TOTAL_WRITE)	Number of disk write operations ^{#2}	ulong	Yes	@@total_write
Trans/sec (TRANS_SEC)	Number of Transact-SQL command batches per second executed within an interval ^{#2}	double	No	master..sysperinfo
Writes Pending (WRITES_PENDING)	This field is reserved and cannot be used.	--	--	--

2.8.9 Job History Detail (PD_JH)

Function

The Job History Detail (PD_JH) record indicates job history information incorporated into the Microsoft SQL Server schedule. One record is created for each case of job step history. This is a multi-instance record.

Table 2.190 Job History Detail (PD_JH) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	300	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- Completion Time (COMPLETION_TIME)
- Instance ID (INSTANCE_ID)
- Step ID (STEP_ID)

Lifetime

From the time a job incorporated into the Microsoft SQL Server schedule is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 8,374 bytes

Table 2.191 Job History Detail (PD_JH) Fields

Job History Detail (PD_JH) Fields				
View Name (Manager Name)	Description	Format	Delta	Data Source
Command (COMMAND)	Command executed by a subcommand	string(8001)	No	msdb..sysjobsteps.command
Completion Time (COMPLETION_TIME)	Job or step completion time	time_t	No	msdb..sysjobhistory.(run_date+run_time+run_duration)
Instance ID (INSTANCE_ID)	Job history ID	long	No	msdb..sysjobhistory.instance_id
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always JH)	char(8)	No	Agent Collector
Retries (RETRIES)	Job or step retry count	long	No	msdb..sysjobhistory.retries_attempted
Run Duration (RUN_DURATION)	Time required for job or step completion (in HHMMSS format)	long	No	msdb..sysjobhistory.run_duration
Run Status (RUN_STATUS)	Execution status. The following values are valid: Failure, Success, Retry, Cancelled, or In progress.	string(15)	No	msdb..sysjobhistory.run_status
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Subsystem (SUBSYSTEM)	Subsystem used for executing the step. Values such as LogReader and Sync are valid.	string(81)	No	msdb..sysjobsteps.subsystem
Step ID (STEP_ID)	Step ID	long	No	msdb..sysjobsteps.step_id
Step Name (STEP_NAME)	Step name	string(257)	No	msdb..sysjobsteps.step_name

2.8.10 Licensing Detail (PD_LIC)

Function

The Licensing Detail (PD_LIC) record indicates licensing information, such as the maximum number of Microsoft SQL Server connections allowed. Only one record is created.

Table 2.192 Licensing Detail (PD_LIC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance is created until the time it is deleted

Record Size

- Fixed part: 689 bytes
- Variable part: 0 bytes

Table 2.193 Licensing Detail (PD_LIC) Fields

Licensing Detail (PD_LIC)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always LIC)	char(8)	No	Agent Collector
Session Count (CLIENT_COUNT)	Number of sessions connected to the Microsoft SQL Server during data collection	ulong	No	master..sysperinfo
Session Limit (CLIENT_LIMIT)	Maximum number of sessions allowed to connect to the Microsoft SQL Server	ulong	No	@max_connections
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector

2.8.11 Lock Detail (PD_LD)

Function

The Lock Detail (PD_LD) record indicates detailed information related to database locks. One record is created for each database lock. This is a multi-instance record.

Table 2.194 Lock Detail (PD_LD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- DB Name (DB_NAME)
- DBID (DBID)
- SPID (SPID)

Lifetime

From the time a lock is created until the time it is released

Record Size

- Fixed part: 681 bytes
- Variable part: 926 bytes

Table 2.195 Lock Detail (PD_LD) Fields

Lock Detail (PD_LD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Blocking Flag (BLOCKING)	This flag indicates whether or not the lock is a blocking lock. The following values are valid: 1 Blocking lock 0 Not a blocking lock	word	No	master..syslockin fo.req_status
DB Name (DB_NAME)	Database name related to lock resource	string(257)	No	master..syslockin fo.db_name(rsc_db id)

Lock Detail (PD_LD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
DBID (DBID)	Database ID related to lock resource	word	No	master..syslockinfo.rsc_dbid
Demand Flag (DEMAND)	This flag indicates whether or not the lock is a request lock. The following values are valid: 1 Request lock 0 Not a request lock	word	No	master..syslockinfo.rsc_type, master..syslockinfo.
Lock Type (TYPE)	Lock type (lock request mode and lock resource type)	string(80)	No	master..syslockinfo.req_mode
Orphan Flag (ORPHAN)	This flag indicates whether or not the lock is an isolated lock. The following values are valid: 1 Isolated lock 0 Not an isolated lock	word	No	master..sysprocesses
Page # (PAGE)	Number of pages allocated to the lock resource	ulong	No	master..syslockinfo.rsc_text
Program (PROGRAM)	Name of the application program that is requesting the lock	string(257)	No	master..sysprocesses.program_name
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always LD)	char(8)	No	Agent Collector
SPID (SPID)	Process ID that is requesting the lock	word	No	master..syslockinfo.rsc_spid
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Table (TABLE)	Table name if the lock resource is a table or row	string(257)	No	The value of sysobjects.name in the row that satisfies the condition master..syslockinfo.rsc_objid = sysobjects.id for each database.
User (USER)	Logon name of the user who issued the command	string(61)	No	master..sysprocesses, master..syslogins

2.8.12 Procedure Cache Detail (PD_PCAC)

Function

The Procedure Cache Detail (PD_PCAC) record indicates information related to a procedure cache. Only one record is created.

Procedure cache refers to a memory area that stores the procedure that was used most recently. It is also used for creating a procedure and compiling a query.

Table 2.196 Procedure Cache Detail (PD_PCAC) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance starts until the time it stops

Record Size

- Fixed part: 761 bytes
- Variable part: 0 bytes

Table 2.197 Procedure Cache Detail (PD_PCAC) Fields

Procedure Cache Detail (PD_PCAC)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Max Proc Buffers Active % (MAX_PROCEDURE_BUFFERS_ACTIVE_PCT)	Maximum percentage of procedure cache slots that were used by the stored procedures being executed during the monitoring period	double	No	DBCC PROCCACHE
Max Proc Buffers Used % (MAX_PROCEDURE_BUFFERS_USED_PCT)	Maximum percentage of procedure cache slots that were used during the monitoring period	double	No	DBCC PROCCACHE

Procedure Cache Detail (PD_PCAC)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Max Proc Cache Active % (MAX_PROCEDURE_CACHE_ACTIVE_PCT)	Maximum percentage of procedure cache size that was used by the stored procedures being executed during the monitoring period	double	No	DBCC PROCCACHE
Max Proc Cache Used % (MAX_PROCEDURE_CACHE_USED_PCT)	Maximum percentage of procedure cache size that was used during the monitoring period	double	No	DBCC PROCCACHE
Proc Buffers Active % (PROCEDURE_BUFFERS_ACTIVE_PCT)	Percentage of procedure cache slots that were used by the stored procedures being executed during the monitoring period	double	No	DBCC PROCCACHE
Proc Buffers Used % (PROCEDURE_BUFFERS_USED_PCT)	Percentage of procedure cache slots that were used during the monitoring period	double	No	DBCC PROCCACHE
Proc Cache Active % (PROCEDURE_CACHE_ACTIVE_PCT)	Percentage of procedure cache size that was used by the stored procedures being executed during the monitoring period	double	No	DBCC PROCCACHE
Proc Cache Size (PROCEDURE_CACHE_SIZE)	Total procedure cache size (in pages; 1 page equals 8 kilobytes)	double	No	DBCC PROCCACHE
Proc Cache Used % (PROCEDURE_CACHE_USED_PCT)	Percentage of procedure cache size that was used during the monitoring period	double	No	DBCC PROCCACHE
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always PCAC)	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Total Proc Buffers (TOTAL_PROCEDURE_BUFFERS)	Number of procedure cache slots inside the procedure cache (a fixed value based on the rate of procedure cache already allocated)	double	No	DBCC PROCCACHE

2.8.13 Process Detail (PD_PDET)

Function

The Process Detail (PD_PDET) record indicates detailed information on a particular database process, such as locks and I/O. One record is created for each database process. This is a multi-instance record.

Table 2.198 Process Detail (PD_PDET) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

SPID (SPID)

Lifetime

From the time a process starts until the time it stops

Record Size

- Fixed part: 681 bytes
- Variable part: 1,170 bytes

Table 2.199 Process Detail (PD_PDET) Fields

Process Detail (PD_PDET)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Blocked Processes (BLOCKING)	Number of processes blocked by the process	word	No	master..sysprocesses.blocked
Blocking Process (BLOCKED)	Process ID of a blocking process, if any	word	No	master..sysprocesses.blocked
CPU % (PERC_CPU)	CPU time being used by the process, as a percentage of the CPU time being used by all database processes	double	No	master..sysprocesses.cpu
CPU Timeticks (CPU)	Cumulative CPU time of the process (in ticks)	ulong	No	master..sysprocesses.cpu

Process Detail (PD_PDET)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Command (COMMAND)	Name of the command executed	string(33)	No	master..sysprocesses.cmd
DB Name (DB_NAME)	Name of the database being used by the process at the time of record acquisition	string(257)	No	db_name(master..sysprocesses.dbid)
DBID (DBID)	Database ID being used by the process at the time of record acquisition	word	No	master..sysprocesses.dbid
GID (GID)	This field is reserved and cannot be used.	--	--	--
Host (HOST)	Name of the host computer	string(257)	No	master..sysprocesses.hostname
Host PID (HOST_PID)	ID of the host process	long	No	master..sysprocesses.hostprocess
Locks (LOCKS)	Number of locks being requested by the process at the time of record acquisition	long	No	master..syslockinfo.req_spid
Mem Usage (MEMUSAGE)	Number of procedure cache pages allocated to the process (1 page equals 8 kilobytes)	double	No	master..sysprocesses.memusage
Physical I/O (PHYSICAL_IO)	Cumulative number of times the process executed read/write operations to disks	double	No	master..sysprocesses.physical_io
Program (PROGRAM)	Application program name	string(257)	No	master..sysprocesses.program_name
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always PDET)	char(8)	No	Agent Collector
SPID (SPID)	Process ID	word	No	master..sysprocesses.spid
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Status (STATUS)	Process status	string(61)	No	master..sysprocesses.status
UID (UID)	User ID of the user who executed the command	word	No	master..sysprocesses.uid

Process Detail (PD_PDET)				
View Name (Manager Name)	Description	Format	Delta	Data Source
User (USER)	Logon name of the user who issued the command. If information cannot be obtained from the <code>syslogins</code> system table of Microsoft SQL Server, it is obtained from the <code>sysprocesses</code> system table. If the logon name used is 61 characters or longer, characters after the 61st are truncated.	string(257)	No	master..sysprocesses.sid, master..syslogins.name Or master..sysprocesses.sid, master..sysprocesses.loginame

2.8.14 Replication Published Database Overview (PI_RPDB)

Function

The Replication Published Database Overview (PI_RPDB) record indicates replication information related to database distribution transactions. One record is created for each database published in transaction replication. This is a multi-instance record.

Table 2.200 Replication Published Database Overview (PI_RPDB) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

DB Name (DB_NAME)

Lifetime

From the time a publisher database is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 313 bytes

Table 2.201 Replication Published Database Overview (PI_RPDB) Fields

Replication Published Database Overview (PI_RPDB)				
View Name (Manager Name)	Description	Format	Delta	Data Source
DB Name (DB_NAME)	Database name ^{#1}	string(257)	No	sp_replcounters.D atabase
Record Time (RECORD_TIME)	Interval end time (GMT format) ^{#1}	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always RPDB) ^{#1}	char(8)	No	Agent Collector
Replicated Trans (REPLICATED_TRANSACTION S)	Number of transactions inside the log that are waiting to be distributed to distribution database ^{#2}	ulong	No	sp_replcounters.r eplicated transactions
Replicated Trans/sec (REPLICATED_TRANSACTION S_PER_SEC)	Number of transactions per second distributed to distribution database ^{#2}	double	No	sp_replcounters.r eplication rate trans/sec
Replication Latency (REPLICATION_LATENCY)	Average wait time from transaction registration in the log to its distribution (in seconds) ^{#2}	double	No	sp_replcounters.r eplication latency (sec)
Start Time (START_TIME)	Interval start time (GMT format) ^{#1}	time_t	No	Agent Collector

2.8.15 Replication Summary Detail (PD_RS)

Function

The Replication Summary Detail (PD_RS) record indicates a summary of database replication generated by Microsoft SQL Server. Only one record is created.

As indicated in the following table, the field that can be acquired for this record differs depending on the database type.

Table 2.202 Replication Summary Detail (PD_RS) Fields that Can Be Acquired

Field	Database Type		
	Publisher	Distributor	Subscriber and Others
Articles	Yes	No	No
Delivered Jobs	No	Yes	No
Delivery Latency	No	Yes	No
Delivery Rate	No	Yes	No
Publications	Yes	No	No
Subscriptions	Yes	No	No
None of the above	Yes	Yes	Yes

When a field cannot be acquired, the value is 0.

Table 2.203 Replication Summary Detail (PD_RS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance is created until the time it is deleted

Record Size

- Fixed part: 709 bytes
- Variable part: 0 bytes

Table 2.204 Replication Summary Detail (PD_RS) Fields

Replication Summary Detail (PD_RS)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Articles (ARTICLES)	Total number of articles published by the server	ulong	No	Each publication database's sysarticles
Delivered Jobs (DELIVERED_JOBS)	Number of distribution jobs delivered	ulong	No	Each distribution database's MSdistribution_history
Delivery Latency (DELIVERY_LATENCY)	Time between job receipt and delivery (in seconds)	ulong	No	Each distribution database's MSdistribution_history
Delivery Rate (DELIVERY_RATE)	Number of jobs executed per second in the last batch sent to the subscriber	double	No	Each distribution database's MSdistribution_history
Publications (PUBLICATIONS)	Total number of publications for the server	ulong	No	Each publication database's syspublications
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always RS)	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Subscriptions (SUBSCRIPTIONS)	Total number of subscriptions for the server	ulong	No	Each publication database's syssubscriptions

2.8.16 Server Detail (PD)

Function

The Server Detail (PD) record indicates detailed information on Microsoft SQL Server, such as I/O and locks. Only one record is created.

Table 2.205 Server Detail (PD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance starts until the time it stops

Record Size

- Fixed part: 1,303 bytes
- Variable part: 0 bytes

Table 2.206 Server Detail (PD) Fields

Server Detail (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Avg Cache Scan (CACHE_AVG_SCAN)	This field is reserved and cannot be used.	--	--	--
Blocked Processes (BLOCKED)	Number of blocked processes	word	No	master..sysprocesses.blocked
Blocking Locks (BLOCKING)	Number of blocking locks	ulong	No	master..syslockinfo.req_status
Boot Time (BOOT_TIME)	Time at which the server was started	time_t	No	Microsoft SQL Server error log
Cache Buffers Free (CACHE_FREE_BUFFERS)	Number of data cache buffers inside a free pool	word	No	master..sysperinfo.free pages

Server Detail (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Cache Hit % (CACHE_HIT_RATIO)	Rate at which data pages were found inside the data cache within an interval	double	No	master..sysperfinfo.buffer cache hit ratio / buffer cache hit ratio base * 100
Conns (CONNECTIONS)	Number of client connections	ulong	No	@@connections
CPU % (PERC_BUSY)	Percentage of time CPU is busy	double	No	CPU_BUSY / (CPU_BUSY + IDLE + IO_BUSY) * 100
CPU Time (CPU_TIME)	CPU busy time	utime	Yes	@@cpu_busy / 1000
CPU Timeticks (CPU_BUSY)	CPU usage time (in ticks)	ulong	Yes	@@cpu_busy * 1000 / @@timeticks
Database Count (DATABASES)	Database count	word	No	master..sysdatabases
Demand Locks (DEMAND)	Number of request locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
DSQuery (DS_QUERY)	Value of DSQUERY environment variable. Character string is truncated at 30 bytes.	string(31)	No	<ul style="list-style-type: none"> For Microsoft SQL Server 2000: The value of registry-key\SOFTWARE\Microsoft\MSSQLSERVER\Client\ConnectTo is displayed if it exists. If the value does not exist, N/A is displayed. For Microsoft SQL Server 2005: Always N/A
Exclusive Intent Locks (EXCLUSIVE_INTENT)	Number of exclusive intent locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Exclusive Page Locks (EXCLUSIVE_PAGE)	Number of exclusive page locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Exclusive Table Locks (EXCLUSIVE_TABLE)	Number of exclusive table locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode

Server Detail (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Host OS (OS)	OS under which Microsoft SQL Server is running	string(31)	No	Value of <i>registry-key</i> \SOFTWARE\Microsoft\WindowsNT\CurrentVersion\ProductName
Host Type (HOST_TYPE)	Type of machine on which Microsoft SQL Server is running	string(31)	No	@@version
I/O % (PERC_IO)	Percentage of CPU time spent for I/O	double	No	IO_BUSY / (CPU_BUSY + IDLE + IO_BUSY) * 100
I/O Time (IO_TIME)	Percentage of CPU time spent for I/O	utime	Yes	@@io_busy / 1000
I/O Timeticks (IO_BUSY)	CPU I/O time (in ticks)	ulong	Yes	@@io_busy * 1000 / @@timeticks
Idle % (PERC_IDLE)	Percentage of time CPU is idle	double	No	IDLE / (CPU_BUSY + IDLE + IO_BUSY) * 100
Idle Time (IDLE_TIME)	CPU idle time	utime	Yes	@@idle / 1000
Idle Timeticks (IDLE)	CPU idle time (in ticks)	ulong	Yes	@@idle * 1000 / @@timeticks
Lazy Writes/sec (LAZY_WRITES_SEC)	Number of pages per second flushed by Lazy Writer to a disk within an interval (1 page equals 8 kilobytes)	double	No	master..sysperinfo.lazy writer buffers/sec
Locks (LOCKS)	Total number of locks	ulong	No	master..syslockinfo
Log Writes/sec (LOG_WRITES_SEC)	Number of log pages per second written onto a disk within an interval	double	No	master..sysperinfo.log flushes/sec
Max Cache Scan (CACHE_MAX_SCAN)	This field is reserved and cannot be used.	--	--	--
Net Queue (NET_QUEUE)	This field is reserved and cannot be used.	--	--	--
Net Reads/Sec (NET_READS_SEC)	This field is reserved and cannot be used.	--	--	--
Net Writes/Sec (NET_WRITES_SEC)	This field is reserved and cannot be used.	--	--	--
Other Processes (OTHER)	Number of other types of processes	word	No	master..sysprocesses.status

Server Detail (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Page Reads/sec (PAGE_READS_SEC)	Number of physical pages read per second within an interval	double	No	master..sysperinfo.page reads/sec
Page Writes/sec (PAGE_WRITES_SEC)	Number of physical pages written per second within an interval	double	No	master..sysperinfo.page writes/sec
Pkt Errors (PACKET_ERRORS)	Number of packet errors	ulong	Yes	@@packet_errors
Pkts Rcvd (PACK_RECEIVED)	Number of packets received	ulong	Yes	@@pack_received
Pkts Sent (PACK_SENT)	Number of packets sent	ulong	Yes	@@pack_sent
Process Count (PROCESSES)	Total number of processes	word	No	master..sysprocesses
RA Pages Fetched (RA_PAGES_FETCHED)	Number of pages per second Read Ahead Manager acquired into the cache within an interval	double	No	master..sysperinfo.readahead pages/sec
RA Pages Found (RA_PAGES_FOUND)	This field is reserved and cannot be used.	--	--	--
RA Reads/sec (RA_READS_SEC)	Number of physical read operations executed by Read Ahead Manager within an interval	double	No	master..sysperinfo.page reads/sec
RA Slots Used (RA_SLOTS_USED)	This field is reserved and cannot be used.	--	--	--
Reads Pending (READS_PENDING)	This field is reserved and cannot be used.	--	--	--
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always PD)	char(8)	No	Agent Collector
Runnable Processes (RUNNABLE)	Number of executable processes	word	No	master..sysprocesses.status
Running Processes (RUNNING)	Number of processes being executed	word	No	master..sysprocesses.status
Server Name (SERVER_NAME)	Name of machine on which Microsoft SQL Server is running	string(257)	No	@@servername
Shared Intent Locks (SHARED_INTENT)	Number of shared intent locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode

Server Detail (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Shared Page Locks (SHARED_PAGE)	Number of shared page locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Shared Table Locks (SHARED_TABLE)	Number of shared table locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Sleeping Processes (SLEEPING)	Number of sleeping processes	word	No	master..sysprocesses.status
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Timeticks (TIMETICKS)	Microseconds per tick	ulong	No	@@timeticks
Total Errors (TOTAL_ERRORS)	Number of disk errors	ulong	Yes	@@total_errors
Total Reads (TOTAL_READ)	Number of disk read operations	ulong	Yes	@@total_read
Total Writes (TOTAL_WRITE)	Number of disk write operations	ulong	Yes	@@total_write
Trans/sec (TRANS_SEC)	Number of Transact-SQL command batches per second executed within an interval	double	No	master..sysperinfo.batch requests/sec
Update Page Locks (UPDATE_PAGE)	Number of update page locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Version (SERVER_VERSION)	Microsoft SQL Server version	string(20)	No	@@version
Writes Pending (WRITES_PENDING)	This field is reserved and cannot be used.	--	--	--

2.8.17 Server Locks Detail (PD_LOCK)

Function

The Server Locks Detail (PD_LOCK) record indicates information related to Microsoft SQL Server locks. Only one record is created.

Table 2.207 Server Locks Detail (PD_LOCK) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance starts until the time it stops

Record Size

- Fixed part: 757 bytes
- Variable part: 0 bytes

Table 2.208 Server Locks Detail (PD_LOCK) Fields

Server Locks Detail (PD_LOCK)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Exclusive Extent Locks (EXTENT_LOCKS_EXCLUSIVE)	Number of exclusive extent locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Exclusive Intent Locks (INTENT_LOCKS_EXCLUSIVE)	Number of exclusive intent locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Exclusive Page Locks (PAGE_LOCKS_EXCLUSIVE)	Number of exclusive page locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode

Server Locks Detail (PD_LOCK)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Exclusive Table Locks (TABLE_LOCKS_EXCLUSIVE)	Number of exclusive table locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Max Users Blocked (MAX_USERS_BLOCKED)	Maximum number of users who were blocked by other users during the monitoring period	ulong	No	master..sysprocesses.blocked
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always LOCK)	char(8)	No	Agent Collector
Shared Intent Locks (INTENT_LOCKS_SHARED)	Number of shared intent locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Shared Page Locks (PAGE_LOCKS_SHARED)	Number of shared page locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Shared Table Locks (TABLE_LOCKS_SHARED)	Number of shared table locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Total Blocking Locks (TOTAL_BLOCKING_LOCKS)	Number of locks that are blocking other processes	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Total Exclusive Locks (TOTAL_EXCLUSIVE_LOCKS)	Total number of exclusive locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Total Extent Locks (EXTENT_LOCKS_TOTAL)	Total number of extent locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Total Intent Locks (INTENT_LOCKS_TOTAL)	Total number of intent locks	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode
Total Locks (TOTAL_LOCKS)	Total number of locks being used by Microsoft SQL Server	ulong	No	master..syslockinfo.rsc_type, master..syslockinfo.req_mode

Server Locks Detail (PD_LOCK)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Total Page Locks (PAGE_LOCKS_TOTAL)	Total number of page locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Total Shared Locks (TOTAL_SHARED_LOCKS)	Total number of shared locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Total Table Locks (TABLE_LOCKS_TOTAL)	Total number of table locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Update Extent Locks (EXTENT_LOCKS_UPDATE)	Number of update extent locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Update Page Locks (PAGE_LOCKS_UPDATE)	Number of update page locks	ulong	No	master..syslockinfo.rsc_type,master..syslockinfo.req_mode
Users Blocked (USERS_BLOCKED)	Number of users blocked by other users	ulong	No	master..sysprocesses.blocked

2.8.18 Server Overview (PI_SERV)

Function

The Server Overview (PI_SERV) record indicates overall information related to Microsoft SQL Server, such as the rate of cache hits and I/O. Only one record is created.

Table 2.209 Server Overview (PI_SERV) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance starts until the time it stops

Record Size

- Fixed part: 1,009 bytes
- Variable part: 0 bytes

Table 2.210 Server Overview (PI_SERV) Fields

Server Overview (PI_SERV)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Avg Cache Scan (CACHE_AVG_FREE_PAGE_SCAN)	This field is reserved and cannot be used.	--	--	--
Cache Buffers Free (CACHE_NUMBER_OF_FREE_BUFFERS)	Number of data cache buffers inside a free pool at the time of data collection#2	ulong	No	master..sysperinfo.free pages
Cache Hit % (CACHE_HIT_RATIO)	Rate at which data pages were found inside the data cache#2	double	No	master..sysperinfo.buffer cache hit ratio / buffer cache hit ratio base * 100

Server Overview (PI_SERV)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Command Queue Length (NET_COMMAND_QUEUE_LENGTH)	This field is reserved and cannot be used.	--	--	--
Lazy Writes/sec (IO_LAZY_WRITES_PER_SEC)	Number of pages per second flushed by Lazy Writer to a disk within an interval (1 page equals 8 kilobytes) ^{#2}	double	No	master..sysperinfo.Lazy writes/sec
Log Writes/sec (IO_LOG_WRITES_PER_SEC)	Number of log pages per second physically written onto a disk within an interval ^{#2}	double	No	master..sysperinfo.log flushes/sec
Max Cache Scan (CACHE_MAX_FREE_PAGE_SCAN)	This field is reserved and cannot be used.	--	--	--
Max Tempdb Space Used Mbytes (MAX_TEMPDB_SPACE_USED_MB)	Maximum value of the space used in tempdb within an interval (in megabytes)	double	No	master..sysperinfo.data file(s) size (Kb) / 1024
Max Users Conn'd (MAX_USERS_CONNECTED)	Maximum number of user connections established within an interval	ulong	No	master..sysperinfo.user connections
Net Reads/sec (NET_NETWORK_READS_PER_SEC)	This field is reserved and cannot be used.	--	--	--
Net Writes/sec (NET_NETWORK_WRITES_PER_SEC)	This field is reserved and cannot be used.	--	--	--
Page Reads/sec (IO_PAGE_READS_PER_SEC)	Number of physical pages read per second within an interval ^{#2}	double	No	master..sysperinfo.page reads/sec
Page Writes/sec (IO_PAGE_WRITES_PER_SEC)	Number of physical pages written per second within an interval ^{#2}	double	No	master..sysperinfo.page writes/sec
RA Pages Fetched into Cache/sec (RA_PAGES_FETCHED_INTO_CACHE_PER_SEC)	Number of pages per second prefetched into the cache by Read Ahead Manager within an interval ^{#2}	double	No	master..sysperinfo.readahead pages/sec
RA Pages Found in Cache/sec (RA_PAGES_FOUND_IN_CACHE_PER_SEC)	This field is reserved and cannot be used.	--	--	--
RA Physical Reads/sec (RA_PHYSICAL_READS_PER_SEC)	Number of physical read operations per second issued by Read Ahead Manager within an interval. (A single read operation involves 8 pages, each of which is 8 kilobytes) ^{#2}	double	No	master..sysperinfo.page reads/sec

Server Overview (PI_SERV)				
View Name (Manager Name)	Description	Format	Delta	Data Source
RA Slots Used (RA_SLOTS_USED)	This field is reserved and cannot be used.	--	--	--
Reads Pending (IO_OUTSTANDING_READS)	This field is reserved and cannot be used.	--	--	--
Record Time (RECORD_TIME)	Interval end time (GMT format) ^{#1}	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always SERV) ^{#1}	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format) ^{#1}	time_t	No	Agent Collector
Trans/sec (IO_TRANSACTIONS_PER_SECOND)	Number of Transact-SQL command batches per second executed within an interval ^{#2}	double	No	master..sysperinfo.batch requests/sec
User Conns (USER_CONNECTIONS)	Number of client connections ^{#1}	ulong	No	master..sysperinfo.user connections
Writes Pending (IO_OUTSTANDING_WRITES)	This field is reserved and cannot be used.	--	--	--

2.8.19 Server Space Detail (PD_SS)

Function

The Server Space Detail (PD_SS) record indicates information related to the size of the disk space used by Microsoft SQL Server. Only one record is created.

Table 2.211 Server Space Detail (PD_SS) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance is created until the time it is deleted

Record Size

- Fixed part: 753 bytes
- Variable part: 0 bytes

Table 2.212 Server Space Detail (PD_SS) Fields

Server Space Detail (PD_SS)				
View Name (Manager Name)	Description	Format	Delta	Data Source
DB Size (SIZE)	Size of the entire database (in megabytes)	double	No	sp_databases.db_size
Data Mbytes (DATA)	Size of the database being used (in megabytes)	double	No	Each database's sysindexes table
Free % (PERC_FREE)	Percentage of unallocated space relative to the size of the entire database containing data files and transaction log files	double	No	Each database's sysindexes table, sp_databases.db_size
Free Mbytes (FREE_SPACE)	Size of unallocated space relative to the size of the entire database containing data files and transaction log files (in megabytes)	double	No	Each database's sysindexes table, sp_databases.db_size
Index Mbytes (IDX)	Size of index space being used (in megabytes)	double	No	Each database's sysindexes table
Log Mbytes (LOG)	Size of log space being used (in megabytes)	double	No	DBCC SQLPERF (LOGSPACE)
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always ss)	char(8)	No	Agent Collector
Rsvd Mbytes (RESERVED)	Size of space already allocated (in megabytes)	double	No	Each database's sysindexes table
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
Unused % (PERC_USED)	Percentage of allocated but unused space relative to allocated space	double	No	Each database's sysindexes table
Unused Mbytes (UNUSED)	Size of allocated but unused space (in megabytes)	double	No	Each database's sysindexes table

2.8.20 Server Space Interval (PI_SI)

Function

The Server Space Interval (PI_SI) record indicates interval information related to the size of the disk space used by Microsoft SQL Server. Only one record is created.

Table 2.213 Server Space Interval (PI_SI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time a Microsoft SQL Server instance is created until the time it is deleted

Record Size

- Fixed part: 777 bytes
- Variable part: 0 bytes

Table 2.214 Server Space Interval (PI_SI) Fields

Server Space Interval (PI_SI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Data Mbytes (DATA)	Size of database being used (in megabytes) ^{#1}	double	No	Each database's sysindexes table
DB Size (SIZE)	Size of the entire database (in megabytes) ^{#1}	double	No	sp_databases.db_size
Free % (PERC_FREE)	Percentage of unallocated space relative to the size of the entire database containing data files and transaction log files ^{#2}	double	No	Each database's sysindexes table, sp_databases.db_size
Free Mbytes (FREE_SPACE)	Size of unallocated space relative to the size of the entire database containing data files and transaction log files (in megabytes)	double	No	Each database's sysindexes table, sp_databases.db_size
Index Mbytes (IDX)	Size of index space being used (in megabytes) ^{#1}	double	No	Each database's sysindexes table
Log Mbytes (LOG)	Size of log space being used (in megabytes) ^{#1}	double	No	DBCC SQLPERF (LOGSPACE)
Record Time (RECORD_TIME)	Interval end time (GMT format) ^{#1}	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always SI) ^{#1}	char(8)	No	Agent Collector
Rsvd Mbytes (RESERVED)	Size of space already allocated (in megabytes) ^{#1}	double	No	Each database's sysindexes table
Start Time (START_TIME)	Interval start time (GMT format) ^{#1}	time_t	No	Agent Collector
Unused % (PERC_USED)	Percentage of allocated but unused space relative to allocated space ^{#2}	double	No	Each database's sysindexes table
Unused Mbytes (UNUSED)	Size of allocated but unused space (in megabytes) ^{#1}	double	No	Each database's sysindexes table

2.8.21 SQL Text (PD_SQL)

Function

The SQL Text (PD_SQL) record indicates the execution information on the last query issued by the process. The number of records created equals the number of queries that the process last issued. This is a multi-instance record.

This record cannot be set to store performance data in the Store database by the `jpcastorec update` command of Performance Reporter, because it is available only in real-time.

The SQL Plan and SQL Text fields of this record use a `DBCC INPUTBUFFER` statement for acquiring data. To execute this statement, you must have a fixed server role `sysadmin` member account for the Microsoft SQL Server.

Default and Changeable Values

None

Key Fields

SPID (SPID)

Lifetime

None

Record Size

- Fixed part: 681 bytes
- Variable part: 30,464 bytes

Table 2.215 SQL Text (PD_SQL) Fields

SQL Text (PD_SQL)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Command (COMMAND)	The last command executed	string(33)	No	master..sysprocesses.cmd
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always SQL)	char(8)	No	Agent Collector
SID (SID)	User's security ID	string(171)	No	master..syslogins.sid
SPID (SPID)	Process ID	word	No	master..sysprocesses.spid
SQL Plan (SQL_PLAN)	Displays the execution information for an SQL statement.	string(30001)	No	Result obtained when SET SHOWPLAN_ALL ON and SET NOEXEC ON are specified for executing the SQL Text statement
SQL Text (SQL_TEXT)	Displays the last statement sent by this process.	string(30001)	No	DBCC INPUTBUFFER(master..sysprocesses.spid)
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
User (USER)	Logon name of the user who issued the command	string(257)	No	master..sysprocesses.loginame

2.8.22 Transaction Log Overview (PI_TLOG)

Function

The Transaction Log Overview (PI_TLOG) record indicates information related to transaction log space. One record is created for each database transaction log. This is a multi-instance record.

Table 2.216 Transaction Log Overview (PI_TLOG) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

DB Name (DB_Name)

Lifetime

From the time a database is created until the time it is deleted

Record Size

- Fixed part: 681 bytes
- Variable part: 313 bytes

Table 2.217 Transaction Log Overview (PI_TLOG) Fields

Transaction Log Overview (PI_TLOG)				
View Name (Manager Name)	Description	Format	Delta	Data Source
DB Name (DB_NAME)	Database name ^{#1}	string(257)	No	DBCC SQLPERF (LOGSPACE)
Log Size Mbytes (LOG_SIZE_MB)	Size of space allocated to transaction log (in megabytes) ^{#2}	double	No	DBCC SQLPERF (LOGSPACE)
Log Space Used % (LOG_SPACE_USED_PCT)	Percentage of transaction log space being used by transaction log ^{#2}	double	No	DBCC SQLPERF (LOGSPACE)
Max Log Space Used % (MAX_LOG_SPACE_USED_PCT)	Maximum percentage of log space used within an interval	double	No	DBCC SQLPERF (LOGSPACE)
Max Log Space Used Mbytes (MAX_LOG_SPACE_USED_MB)	Maximum size of log space used within an interval (in megabytes)	double	No	DBCC SQLPERF (LOGSPACE)
Record Time (RECORD_TIME)	Interval end time (GMT format) ^{#1}	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always TLOG) ^{#1}	char(8)	No	Agent Collector
Start Time (START_TIME)	Interval start time (GMT format) ^{#1}	time_t	No	Agent Collector

2.8.23 User-Defined Counter Overview (PI_UCTR)

Function

The User-Defined Counter Overview (PI_UCTR) record indicates information related to each user-defined counter. Only one record is created.

Table 2.218 User-Defined Counter Overview (PI_UCTR) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the time each counter is defined until the time the definition is cancelled

Record Size

- Fixed part: 761 bytes
- Variable part: 0 bytes

Table 2.219 User-Defined Counter Overview (PI_UCTR) Fields

User-Defined Counter Overview (PI_UCTR)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Record Time (RECORD_TIME)	Interval end time (GMT format) ^{#1}	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always UCTR) ^{#1}	char(8)	No	Agent Collector
SQL User Counter 1 (COUNTER_1)	Microsoft SQL Server user definition counter 1 ^{#1}	double	No	master..sysperfinfo.User counter1
SQL User Counter 2 (COUNTER_2)	Microsoft SQL Server user definition counter 2 ^{#1}	double	No	master..sysperfinfo.User counter2
SQL User Counter 3 (COUNTER_3)	Microsoft SQL Server user definition counter 3 ^{#1}	double	No	master..sysperfinfo.User counter3
SQL User Counter 4 (COUNTER_4)	Microsoft SQL Server user definition counter 4 ^{#1}	double	No	master..sysperfinfo.User counter4
SQL User Counter 5 (COUNTER_5)	Microsoft SQL Server user definition counter 5 ^{#1}	double	No	master..sysperfinfo.User counter5
SQL User Counter 6 (COUNTER_6)	Microsoft SQL Server user definition counter 6 ^{#1}	double	No	master..sysperfinfo.User counter6
SQL User Counter 7 (COUNTER_7)	Microsoft SQL Server user definition counter 7 ^{#1}	double	No	master..sysperfinfo.User counter7
SQL User Counter 8 (COUNTER_8)	Microsoft SQL Server user definition counter 8 ^{#1}	double	No	master..sysperfinfo.User counter8
SQL User Counter 9 (COUNTER_9)	Microsoft SQL Server user definition counter 9 ^{#1}	double	No	master..sysperfinfo.User counter9
SQL User Counter 10 (COUNTER_10)	Microsoft SQL Server user definition counter 10 ^{#1}	double	No	master..sysperfinfo.User counter10
Start Time (START_TIME)	Interval start time (GMT format) ^{#1}	time_t	No	Agent Collector

2.8.24 User Process Detail (PD_USER)

Function

The User Process Detail (PD_USER) record indicates information related to each logged-on user. One record is created for each user process. This is a multi-instance record.

Table 2.220 User Process Detail (PD_USER) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

- SID (SID)
- SPID (SPID)

Lifetime

From the time a process starts until the time it stops

Record Size

- Fixed part: 681 bytes
- Variable part: 791 bytes

Table 2.221 User Process Detail (PD_USER) Fields

User Process Detail (PD_USER)				
View Name (Manager Name)	Description	Format	Delta	Data Source
CPU Time (CPU_TIME)	Cumulative time in which CPU was busy for the user	utime	No	master..sysprocesses.cpu
Locks held (LOCKS_HELD)	Number of locks held by user connection	ulong	No	master..syslockinfo.req_spid
Login Name (LOGIN_NAME)	Actual name of the user	string(257)	No	master..syslogins.loginname
Mem Pages (MEMORY)	Size of memory allocated to user connection (1 page equals 8 kilobytes)	ulong	No	master..sysprocesses.memusage
Physical I/O (PHYSICAL_IO)	Cumulative number of disk read/write operations by the user	double	No	master..sysprocesses.physical_io
Record Time (RECORD_TIME)	Interval end time (GMT format)	time_t	No	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record type (always USER)	char(8)	No	Agent Collector
Role (ROLE)	Fixed server role to which the user belongs. Delimited by commas.	string(80)	No	master..syslogins
SID (SID)	Security ID of the user. Hexadecimal. If information cannot be obtained from the syslogins system table of Microsoft SQL Server, it is obtained from the sysprocesses system table.	string(171)	No	master..syslogins.sid or master..sysprocesses.sid
SPID (SPID)	Connection process ID of the user	word	No	master..sysprocesses.spid
Start Time (START_TIME)	Interval start time (GMT format)	time_t	No	Agent Collector
User (USER_ID)	User ID. If information cannot be obtained from the syslogins system table of Microsoft SQL Server, it is obtained from the sysprocesses system table. If the logon name used is 61 characters or longer, the part exceeding 61 characters is cut off.	string(257)	No	master..sysprocesses.sid, master..syslogins.name or master..sysprocesses.sid, master..sysprocesses.loginname

2.8.25 Reserved and Unavailable Records

The following records are reserved and unavailable:

- Errorlog Summary Interval (PI_ESI)
- Generic Data Detail (PD_GEND)
- Generic Data Interval (PI_GENI)
- Restore History Detail (PD_RH)
- SQL Text - Performance-Based (PD_PDES)

2.9 Agent for Microsoft Exchange Server Records

Table 2.222 lists the records that can be collected by the Agent for Microsoft Exchange Server and the information that is stored in each record.

Table 2.222 Agent for Microsoft Exchange Server Records

Record Name	Record ID	Information Stored in Record
Database	PI_DB	Performance data, taken at specific intervals, about the database used by the information store
Epoxy	PI_EPOX	Performance data, taken at specific intervals, about the shared memory queue system (Epoxy)
MSExchangeIS	PI	Performance data, taken at specific intervals, about the information store
MSExchangeIS Mailbox	PI_ISM	Performance data, taken at specific intervals, about the mailbox store
MSExchangeIS Public	PI_ISP	Performance data, taken at specific intervals, about the public store
Process	PD	Performance data indicating the status of the Microsoft Exchange Server processes at a specific point in time

2.9.1 Database (PI_DB)

Function

The Database (PI_DB) record stores performance data, taken at specific intervals, about the database used by the information store.

Table 2.223 Database (PI_DB) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From starting to stopping of the Microsoft Exchange Server service

Record Size

- Fixed part: 729 bytes
- Variable part: 0 bytes

Table 2.224 Database (PI_DB) Fields

Database (PI_DB)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Database Cache % Hit (DB_CACHE_PERCENT_HIT)	Database Cache % Hit is the percentage of database file page requests that were fulfilled by the database cache without causing a file operation. If this percentage is too low, the database cache size may be too small.	double	No	--

Database (PI_DB)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Database Cache Size (DB_CACHE_SIZE)	Database Cache Size is the amount of system memory used by the database cache manager to hold commonly used information from the database file(s) to prevent file operations. If the database cache size seems to be too small for optimal performance and there is very little available memory on the system (see Memory/Available Bytes), adding more memory to the system may increase performance. If there is a lot of available memory on the system and the database cache size is not growing beyond a certain point, the database cache size may be capped at an artificially low limit. Increasing this limit may increase performance.	double	No	--
Database Page Fault Stalls/sec (DB_PAGE_FAULT_STALLS_PER_SEC)	Database Page Fault Stalls/sec is the rate of page faults that cannot be serviced because there are no pages available for allocation from the database cache. If this counter is non-zero most of the time, the clean threshold may be too low.	double	No	--
Interval (interval)	Interval, in seconds, over which the information was collected.	ulong	No	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Log Record Stalls/sec (LOG_RECORD_STALLS_PER_SEC)	Log Record Stalls/sec is the number of log records that cannot be added to the log buffers per second because they are full. If this counter is non-zero most of the time, the log buffer size may be a bottleneck.	double	No	--
Log Threads Waiting (LOG_THREADS_WAITING)	Log Threads Waiting is the number of threads waiting for their data to be written to the log in order to complete an update of the database. If this number is too high, the log may be a bottleneck.	double	No	--
Record Time (record_time)	Greenwich mean time at which the record was created.	time_t	No	--
Record Type (szRecordType)	Record type identifier. always "DB".	char(8)	No	--
Table Open Cache % Hit (TABLE_OPEN_CACHE_PERCENT_HIT)	Table Open Cache % Hit is the percentage of database tables opened using cached schema information. If this percentage is too low, the table cache size may be too small.	double	No	--

2.9.2 Epoxy (PI_EPOX)

Function

The Epoxy (PI_EPOX) record stores performance data, taken at specific intervals, about the shared memory queue system (Epoxy). This is a multi-instance record.

Table 2.225 Epoxy (PI_EPOX) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

Protocol Name (PROTOCOL_NAME)

Lifetime

From starting to stopping of the Microsoft Exchange Server service

Record Size

- Fixed part: 681 bytes
- Variable part: 272 bytes

Table 2.226 Epoxy (PI_EPOX) Fields

Epoxy (PI_EPOX)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Client Out Queue Length (CLIENT_OUT_QUEUE_LENGTH)	Number of requests waiting to be processed by the Exchange store	double	No	--
Interval (interval)	Interval, in seconds, over which the information was collected.	ulong	No	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Protocol Name (PROTOCOL_NAME)	Protocol name	string(256)	No	--
Record Time (record_time)	Greenwich mean time at which the record was created.	time_t	No	--
Record Type (szRecordType)	Record type identifier; always "EPOX".	char(8)	No	--
Store Out Queue Length (STORE_OUT_QUEUE_LENGTH)	Number of requests waiting to be picked up by the Internet Information Services protocol handlers	double	No	--

2.9.3 MExchangeIS (PI)

Function

The MExchangeIS (PI) record stores performance data, taken at specific intervals, about the information store.

Table 2.227 MExchangeIS (PI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From starting to stopping of the Microsoft Exchange Server service

Record Size

- Fixed part: 785 bytes
- Variable part: 0 bytes

Table 2.228 MExchangeIS (PI) Fields

MExchangeIS (PI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Active User Count (ACTIVE_USER_COUNT)	Number of user connections that have shown some activity in the last 10 minutes.	double	No	--
Connection Count (CONNECTION_COUNT)	Connection Count is the number of client processes connected to the information store.	double	No	--
Exchmem Additional Heaps (EXCHMEM_ADDITIONAL_HEAPS)	The number of Exchmem heaps created by MExchangeIS after startup.	double	No	--
Exchmem Heaps with Memory Errors (EXCHMEM_HEAPS_WITH_MEMORY_ERR)	The total number of Exchmem heaps that failed allocations due to insufficient available memory.	double	No	--

MSExchangeIS (PI)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Exchmem Memory Errors (EXCHMEM_MEMORY_ERR)	The total number of Exchmem allocations that could not be satisfied by available memory.	double	No	--
Interval (interval)	Interval, in seconds, over which the information was collected.	ulong	No	RECORD_TIME - CURRENT_SYST EM_BOOT_TIME
Record Time (record_time)	Greenwich mean time at which the record was created.	time_t	No	--
Record Type (szRecordType)	Record type identifier; always "PI".	char(8)	No	--
RPC Averaged Latency (RPC_AVERAGED_LATENCY)	RPC latency in milliseconds averaged for the past 1024 packets.	double	No	--
RPC Operations/sec (RPC_OPERATIONS_PER_SEC)	RPC Operations/sec is the rate that RPC operations occur.	double	No	--
RPC Requests (RPC_REQUESTS)	RPC Requests is the number of client requests that are currently being processed by the information store.	double	No	--
User Count (USER_COUNT)	User Count is the number of users connected to the information store.	double	No	--
VM Largest Block Size (VM_LARGEST_BLOCK_SIZE)	Size of the largest free virtual memory block (Kbytes).	double	No	VM Largest Block Size / 1024
VM Total 16 MB Free Blocks (VM_TOTAL_16_MB_FREE_BLOCKS)	Total number of free Virtual Memory blocks larger than or equal to 16MB.	double	No	--
VM Total Free Blocks (VM_TOTAL_FREE_BLOCKS)	Total number of free Virtual Memory blocks.	double	No	--
VM Total Large Free Block Bytes (VM_TOTAL_LARGE_FREE_BLOCK)	Total number of Kbytes in free Virtual Memory blocks larger than or equal to 16MB.	double	No	VM Total Large Free Block Bytes / 1024

2.9.4 MExchangeIS Mailbox (PI_ISM)

Function

The MExchangeIS Mailbox (PI_ISM) record stores performance data, taken at specific intervals, about the mailbox store.

Table 2.229 MExchangeIS Mailbox (PI_ISM) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From starting to stopping of the Microsoft Exchange Server service

Record Size

- Fixed part: 841 bytes
- Variable part: 0 bytes

Table 2.230 MExchangeIS Mailbox (PI_ISM) Fields

MExchangeIS Mailbox (PI_ISM)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Average Delivery Time (AVERAGE_DELIVERY_TIME)	Average Delivery Time is the average time in milliseconds between the submission of a message to the mailbox store and the delivery to all local recipients (recipients on the same server) for the last 10 messages.	double	No	--
Folder Opens/sec (FOLDER_OPENS_PER_SEC)	Folder opens/sec is the rate that requests to open folders are submitted to the information store.	double	No	--
Interval (interval)	Interval, in seconds, over which the information was collected.	ulong	No	RECORD_TIME - CURRENT_SYSTEM _BOOT_TIME
Message Opens/sec (MESSAGE_OPENS_PER_SEC)	Message Opens/sec is the rate that requests to open messages are submitted to the information store.	double	No	--
Messages Submitted (MESSAGES_SUBMITTED)	Messages Submitted is the total number of messages submitted by clients since service startup.	double	No	--
Messages Submitted/min (MESSAGES_SUBMITTED_MIN)	Messages Submitted/min is the rate that messages are submitted by clients.	double	No	--
Message Recipients Delivered/min (MSG_RECIPIENTS_DELIVER ED_PER_MIN)	Message Recipients Delivered/min is the rate that recipients receive messages.	double	No	--
Receive Queue Size (RECEIVE_QUEUE_SIZE)	This field is reserved and cannot be used.	--	--	--
Record Time (record_time)	Greenwich mean time at which the record was created.	time_t	No	--
Record Type (szRecordType)	Record type identifier; always "ISM".	char(8)	No	--
Send Queue Size (SEND_QUEUE_SIZE)	Send Queue Size is the number of messages in the mailbox store's send queue.	double	No	--

2.9.5 MExchangeIS Public (PI_ISP)

Function

The MExchangeIS Public (PI_ISP) record stores performance data, taken at specific intervals, about the public store.

Table 2.231 MExchangeIS Public (PI_ISP) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From starting to stopping of the Microsoft Exchange Server service

Record Size

- Fixed part: 841 bytes
- Variable part: 0 bytes

Table 2.232 MExchangeIS Public (PI_ISP) Fields

MExchangeIS Public (PI_ISP)				
View Name (Manager Name)	Description	Format	Delta	Data Source
Average Delivery Time (AVERAGE_DELIVERY_TIME)	Average Delivery Time is the average time in milliseconds between the submission of a message to the public store and the delivery to all local recipients (recipients on the same server) for the last 10 messages.	double	No	--
Folder Opens/sec (FOLDER_OPENS_PER_SEC)	Folder opens/sec is the rate that requests to open folders are submitted to the information store.	double	No	--
Interval (interval)	Interval, in seconds, over which the information was collected.	ulong	No	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Message Opens/sec (MESSAGE_OPENS_PER_SEC)	Message Opens/sec is the rate that requests to open messages are submitted to the information store.	double	No	--
Messages Submitted (MESSAGES_SUBMITTED)	This field is reserved and cannot be used.	--	--	--
Messages Submitted/min (MESSAGES_SUBMITTED_MIN)	This field is reserved and cannot be used.	--	--	--
Message Recipients Delivered/min (MSG_RECIPIENTS_DELIVERED_PER_MIN)	Message Recipients Delivered/min is the rate that recipients receive messages.	double	No	--
Receive Queue Size (RECEIVE_QUEUE_SIZE)	This field is reserved and cannot be used.	--	--	--
Record Time (record_time)	Greenwich mean time at which the record was created.	time_t	No	--
Record Type (szRecordType)	Record type identifier; always "ISP".	char(8)	No	--
Send Queue Size (SEND_QUEUE_SIZE)	Send Queue Size is the number of messages in the public store's send queue.	double	No	--

2.9.6 Process (PD)

Function

The Process (PD) record stores performance data indicating the status of the Microsoft Exchange Server processes (*store*, *emsmta*, *mad*, and *exmgmt*) at a specific point in time. This is a multi-instance record.

Table 2.233 Process (PD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

Process Name (*PROCESS_NAME*)

Lifetime

From starting to stopping of the Microsoft Exchange Server service

Record Size

- Fixed part: 681 bytes
- Variable part: 300 bytes

Table 2.234 Process (PD) Fields

Process (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
% Processor Time (<i>PERCENT_PROCESSOR_TIME</i>)	% Processor Time is the percentage of elapsed time that all of process threads used the processor to execution instructions. An instruction is the basic unit of execution in a computer, a thread is the object that executes instructions, and a process is the object created when a program is run. Code executed to handle some hardware interrupts and trap conditions are included in this count.	double	No	--
Elapsed Time (<i>ELAPSED_TIME</i>)	The total elapsed time, in seconds, that this process has been running.	double	No	--
Interval (<i>interval</i>)	Interval, in seconds, over which the information was collected.	ulong	No	<i>RECORD_TIME</i> - <i>CURRENT_SYS</i>

Process (PD)				
View Name (Manager Name)	Description	Format	Delta	Data Source
				TEM_BOOT_TIME
Page Faults/sec (PAGE_FAULTS_PER_SEC)	Page Faults/sec is the rate at which page faults by the threads executing in this process are occurring. A page fault occurs when a thread refers to a virtual memory page that is not in its working set in main memory. This may not cause the page to be fetched from disk if it is on the standby list and hence already in main memory, or if it is in use by another process with whom the page is shared.	double	No	--
Page File Bytes (PAGE_FILE_BYTES)	Page File Bytes is the current amount of virtual memory, in Kbytes, that this process has reserved for use in the paging file(s). Paging files are used to store pages of memory used by the process that are not contained in other files. Paging files are shared by all processes, and the lack of space in paging files can prevent other processes from allocating memory. If there is no paging file, this counter reflects the current amount of virtual memory that the process has reserved for use in physical memory.	double	No	Page File Bytes / 1024
Process Name (PROCESS_NAME)	Process Name of Microsoft Exchange Server.	string (256)	No	--
Record Time (record_time)	Greenwich mean time at which the record was created.	time_t	No	--
Record Type (szRecordType)	Record type identifier. always "PD".	char (8)	No	--
Virtual Bytes (VIRTUAL_BYTES)	Virtual Bytes is the current size, in Kbytes, of the virtual address space the process is using. Use of virtual address space does not necessarily imply corresponding use of either disk or main memory pages. Virtual space is finite, and the process can limit its ability to load libraries.	double	No	Virtual Bytes / 1024
Working Set (WORKING_SET)	Working Set is the current size, in Kbytes, of the Working Set of this process. The Working Set is the set of memory pages touched recently by the threads in the process. If free memory in the computer is above a threshold, pages are left in the Working Set of a process even if they are not in use. When free memory falls below a threshold, pages are trimmed from Working Sets. If they are needed they will then be soft-faulted back into the Working Set before leaving main memory.	double	No	Working Set / 1024

2.10 Agent for DB2 Records

Table 2.235 lists the records that can be collected by the Agent for DB2 and the information that is stored in each record.

Table 2.235 Agent for DB2 Records

Record Name	Record ID	Information Stored in Record
Basic Information on Application	PD_DBIA	Basic information in database units on the application level. See <i>Note 1</i> and <i>Note 2</i>
Basic Information on Database	PD_DBID	Basic information in database units on the database level. See <i>Note 1</i>
Basic Information on Database Manager	PD_PD	Basic information in database units on the database manager level.
Basic Information on Database Manager Interval	PI_PI	Information regarding basic information in database units on the database manager level, using constant units.
Bufferpool Stat on Database	PD_DBPD	Information about the buffer pool on the database level. See <i>Note 1</i>
Bufferpool Stat on Database Interval	PI_DBPI	Information about the buffer pool on the database level, using a constant interval as a unit. See <i>Note 1</i>
Cache on Application	PD_DCAA	Information about the cache on the application level. See <i>Note 1</i> and <i>Note 2</i>
Cache on Database	PD_DCAD	Information about the cache on the database level. See <i>Note 1</i>
Cache on Database Interval	PI_DCAI	Information about the cache on the database level using a constant interval as a unit. See <i>Note 1</i>
DB2 Configuration	PD_DCFE	Information about DB2 configuration parameters.
Sort Status on Database	PD_DSOD	Information about sorting on the database level. See <i>Note 1</i>
SQL Statement on Application	PD_DSQA	Information about SQL Statement on the application level. See <i>Note 1</i> and <i>Note 2</i>
SQL Statement on Database	PD_DSQD	Information about SQL Statement on the database level. See <i>Note 1</i>
Tablespace Information on DB	PD_DTID	Information about tablespaces. See <i>Note 1</i> and <i>Note 2</i>

Note 1: Database level information, application level information, and tablespace information is collected only when connected to one or more applications.

Note 2: A maximum of 1,000 records of application level information and tablespace information are displayed.

2.10.1 Basic Information on Application(PD_DBIA)

Function

The Basic Information on Application (PD_DBIA) record stores basic information about database units on the application level. This is a multi-instance record.

Table 2.236 Basic Information on Application (PD_DBIA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 681 bytes
- Variable part: 629 bytes

Table 2.237 Basic Information on Application (PD_DBIA) Fields

Basic Information on Application (PD_DBIA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agent Id (AGENT_ID)	Application specific ID.	ulong	No	All	--	SQLM_ELM_AGENT_ID
Agents Top (AGENTS_TOP)	On the application level, the maximum number of agents used when executing a statement. On the database level, the maximum number of agents for an application.	ulong	No	All	--	SQLM_ELM_AGENTS_TOP
Appl Id (APPL_ID)	ID for an application when it connects to a database of the database manager.	string (33)	No	All	--	SQLM_ELM_APPL_ID
Appl Name (APPL_NAME)	Name of the application that is being executed on the client.	string (257)	No	All	--	SQLM_ELM_APPL_NAME
Appl Section Inserts (APPL_SECTION_INSERTS)	Number of inserted SQL sections by applications in an SQL work area.	ulong	No	All	--	SQLM_ELM_APPL_SECTION_INSERTS
Appl Section Lookups (APPL_SECTION_LOOKUPS)	Number of SQL section references by applications from the SQL work area.	ulong	No	All	--	SQLM_ELM_APPL_SECTION_LOOKUPS
Auth Id (AUTH_ID)	Authorization ID of the user who has called the application that is being monitored.	string (33)	No	All	--	SQLM_ELM_AUTH_ID
DB Name (DB_NAME)	Real name of the database where the information is collected, or real name of the database at the application connection target.	string (9)	No	All	--	SQLM_ELM_DB_NAME
DB Path (DB_PATH)	Absolute path to the location of the database stored on the monitoring-target system.	string (257)	No	All	--	SQLM_ELM_DB_PATH
Hash Join Overflows (HASH_JOIN_OVERFLOW)	Number of times hash join data exceeded the usable sort heap space.	ulong	No	All	--	SQLM_ELM_HASH_JOIN_OVERFLOW

Basic Information on Application (PD_DBIA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Hash Join Overflows Rate (HASH_JOIN_OVERFLOW_RATE)	Ratio of hash_join_small_overflows to hash_join_overflows.	float	No	All	--	(HASH_JOIN_SMALL_OVERFLOWS / HASH_JOIN_OVERFLOWS) *100
Hash Join Small Overflows (HASH_JOIN_SMALL_OVERFLOWS)	Number of times hash join data exceeded the usable sort heap space without exceeding 10%.	ulong	No	All	--	SQLM_ELM_HASH_JOIN_SMALL_OVERFLOWS
Interval (INTERVAL)	Time for information collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Num Assoc Agents (NUM_ASSOC_AGENTS)	Number of subagents associated with one application.	ulong	No	All	--	SQLM_ELM_NUM_ASSOC_AGENTS
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DBIA.	char(8)	Yes	All	--	Agent Collector
Total Hash Joins (TOTAL_HASH_JOINS)	Total number of executed hash joins.	ulong	No	All	--	SQLM_ELM_TOTAL_HASH_JOINS
Total Hash Loops (TOTAL_HASH_LOOPS)	Total number of times that the single partition of the hash join was larger than the usable sort heap space.	ulong	No	All	--	SQLM_ELM_TOTAL_HASH_LOOPS

2.10.2 Basic Information on Database (PD_DBID)

Function

The Basic Information on Database (PD_DBID) record stores basic information about database units on the database level.

Table 2.238 Basic Information on Database (PD_DBID) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 1,030 bytes
- Variable part: 0 bytes

Table 2.239 Basic Information on Database (PD_DBID) Fields

Basic Information on Database (PD_DBID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agents Top (AGENTS_TOP)	On the application level, the maximum number of agents used when executing a statement. On database level, the maximum number of agents for an application.	ulong	No	All	--	SQLM_ELM_AGENT S_TOP
Appl Section Inserts (APPL_SECTION_IN SERTS)	Number of SQL section inserts by applications from the SQL work area.	ulong	No	All	--	SQLM_ELM_APPL_ SECTION _INSERT S
Appl Section Lookups (APPL_SECTION_LO OKUPS)	Number of SQL section references by applications from the SQL work area.	ulong	No	All	--	SQLM_ELM_APPL_ SECTION _LOOKUP S

Basic Information on Database (PD_DBID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Appls Cur Cons (APPLS_CUR_CONS)	Number of applications connected to this database.	ulong	No	All	--	SQLM_ELM_APPLS_CUR_CONS
Appls In DB2 (APPLS_IN_DB2)	Number of applications that are performing processing requested by the database manager that is connected to the database.	ulong	No	All	--	SQLM_ELM_APPLS_IN_DB2
Coord Agents Top (COORD_AGENTS_TOP)	Maximum number of coordinator agents that can operate simultaneously.	ulong	No	All	--	SQLM_ELM_COORD_AGENTS_TOP
DB Heap Top (DB_HEAP_TOP)	Memory usage.	ulong	No	All	--	SQLM_ELM_DB_HEAP_TOP
DB Name (DB_NAME)	The real name of the database where the information is collected, or the real name of the database at the application's connection target.	string(9)	No	All	--	SQLM_ELM_DB_NAME
DB Path (DB_PATH)	Absolute path to the location of the database stored on the monitor-target system.	string(257)	No	All	--	SQLM_ELM_DB_PATH
DB Status (DB_STATUS)	Current database status.	ulong	No	All	--	SQLM_ELM_DB_STATUS
Hash Join Overflows (HASH_JOIN_OVERFLOW)	The number of times when hash join data exceeded usable sort heap space.	ulong	No	All	--	SQLM_ELM_HASH_JOIN_OVERFLOW
Hash Join Overflows Rate (HASH_JOIN_OVERFLOW_RATE)	Ratio of hash_join_small_overflows and hash_join_overflows.	float	No	All	--	(HASH_JOIN_SMALL_OVERFLOW / HASH_JOIN_OVERFLOW) *100
Hash Join Small Overflows (HASH_JOIN_SMALL_OVERFLOW)	The number of times that hash join data exceeded the usable sort heap space without exceeding 10%.	ulong	No	All	--	SQLM_ELM_HASH_JOIN_SMALL_OVERFLOW

Basic Information on Database (PD_DBID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Interval (interval)	Time for information collected, in seconds.	ulong	No	All	--	RECORD_ TIME - CURRENT_ SYSTEM_ BOOT_ TIME
Last Backup (LAST_BACKUP)	Most recent database backup completion date.	string(27)	No	All	--	SQLM_ELM_LAST_BACKUP
Num Assoc Agents (NUM_ASSOC_AGENTS)	On the application level, the number of subagents associated with one application. On the database level, the total number of subagents for all applications.	ulong	No	All	--	SQLM_ELM_NUM_ASSOC_AGENTS
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DBID.	char(8)	No	All	--	Agent Collector
Total Hash Joins (TOTAL_HASH_JOINS)	Total number of executed hash joins.	ulong	No	All	--	SQLM_ELM_TOTAL_HASH_JOINS
Total Hash Loops (TOTAL_HASH_LOOPS)	The total number of times when the single partition of the hash join was larger than the usable sort heap space.	ulong	No	All	--	SQLM_ELM_TOTAL_HASH_LOOPS

2.10.3 Basic Information on Database Manager (PD_PD)

Function

The Basic Information on Database Manager (PD_PD) record stores basic information about database manager units on the database manager level.

Table 2.240 Basic Information on Database Manager (PD_PD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of the database.

Record Size

- Fixed part: 845 bytes
- Variable part: 0 bytes

Table 2.241 Basic Information on Database Manager (PD_PD) Fields

Basic Information on Database Manager (PD_PD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agents Created Empty Pool (AGENTS_CREATED_ EMPTY_POOL)	Number of agents created due to the agent pool being empty.	ulong	No	All	--	SQLM_ELM_ AGENTS_CR EATED_EMP TY_POOL
Agents Created Pool Rate (AGENTS_CREATED_ POOL_RATE)	Frequency with which agents were created due to the agent pool being empty.	float	No	All	--	(AGENTS_CR EATED_EMP TY_POOL / AGENTS_FR OM_POOL) *100
Agents From Pool (AGENTS_FROM_POO L)	The number of agents assigned from the agent pool.	ulong	No	All	--	SQLM_ELM_ AGENTS_FR OM_POOL

Basic Information on Database Manager (PD_PD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agents Registered (AGENTS_REGISTERED)	The number of agents (coordinator agents and subagents) registered with the monitored database manager instance.	ulong	No	All	--	SQLM_ELM_AGENTS_REGISTERED
Agents Registered Top (AGENTS_REGISTERED_TOP)	The maximum number of agents (coordinator agents and subagents) registered simultaneously with the database manager since startup.	ulong	No	All	--	SQLM_ELM_AGENTS_REGISTERED_TOP
Agents Waiting On Token (AGENTS_WAITING_ON_TOKEN)	The number of agents waiting for tokens to execute transactions in the database manager.	ulong	No	All	--	SQLM_ELM_AGENTS_WAITING_ON_TOKEN
Agents Waiting Top (AGENTS_WAITING_TOP)	The largest number of agents that waited simultaneously for a token, since the database manager started.	ulong	No	All	--	SQLM_ELM_AGENTS_WAITING_TOP
Comm Private Mem (COMM_PRIVATE_MEM)	Amount of dedicated memory committed by the database manager instance at the time the snapshot was taken.	ulong	No	All	--	SQLM_ELM_COMM_PRIVATE_MEM
Cons In Exec Total (CONS_IN_EXEC_TOTAL)	Total number of applications that are connected to a database in the monitored database manager instance, and are also processing task units.	ulong	No	All	--	(REM_CONS_IN_EXEC + LOCAL_CONS_IN_EXEC)
Cons Total (CONS_TOTAL)	Total number of applications connected to the monitored database manager instance or the database.	ulong	No	All	--	(REM_CONS_IN + LOCAL_CONS)
DB2 Status (DB2_STATUS)	Current status of the database manager instance. When the database manager is running: 0 (SQLM_DB2_ACTIVE) When the database manager has stopped: 100 (This value is set by the Agent for DB2) If the value is neither 0 nor 100, refer to the DB2 manual for details.	ulong	No	All	--	SQLM_ELM_DB2_STATUSES

Basic Information on Database Manager (PD_PD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Interval (interval)	Time for the information collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Local Cons (LOCAL_CONS)	Number of local applications connected to the database in the monitored database manager instance.	ulong	No	All	--	SQLM_ELM_LOCAL_CONS
Local Cons In Exec (LOCAL_CONS_IN_EXEC)	Number of local applications that are connected to a database in the monitored database manager instance, and are also processing task units.	ulong	No	All	--	SQLM_ELM_LOCAL_CONS_IN_EXEC
Post Threshold Hash Joins (POST_THRESHOLD_HASH_JOINS)	Total number of times that a hash join heap request was limited because the shared or dedicated sort heap space was concurrently used.	ulong	No	All	--	SQLM_ELM_POST_THRESHOLD_HASH_JOINS
Product Name (PRODUCT_NAME)	Detailed version information on the currently executing DB2 instance.	string (48)	No	All	--	SQLM_ELM_PRODUCT_NAME
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always PD.	char(8)	No	All	--	Agent Collector
Rem Cons In (REM_CONS_IN)	Number of connections started from a remote client to the monitored database manager instance.	ulong	No	All	--	SQLM_ELM_REM_CONS_IN
Rem Cons In Exec (REM_CONS_IN_EXEC)	Number of remote applications that are connected to a database in the monitored database manager instance, and are also processing task units.	ulong	No	All	--	SQLM_ELM_REM_CONS_IN_EXEC
Service Level (SERVICE_LEVEL)	Current corrected service level for the DB2 instance.	string (48)	No	All	--	SQLM_ELM_SERVICE_LEVEL
Sort Heap Allocated (SORT_HEAP_ALLOCATED)	The total number of sort heap space pages allocated to all sort operations at the selected level, at the time the snapshot was taken.	ulong	No	All	--	SQLM_ELM_SORT_HEAP_ALLOCATED

2.10.4 Basic Information on Database Manager Interval (PI_PI)

Function

The Basic Information on Database Manager Interval (PI_PI) record stores the information for a certain interval based on basic information at the database manager level, in database units.

Table 2.242 Basic Information on Database Manager Interval (PI_PI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of the database.

Record Size

- Fixed part: 857 bytes
- Variable part: 0 bytes

Table 2.243 Basic Information on Database Manager Interval (PI_PI) Fields

Basic Information on Database Manager Interval (PI_PI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agents Created Empty Pool (AGENTS_CREATED_EMPTY_POOL)	Number of agents created due to the agent pool being empty.	ulong	No	All	--	SQLM_ELM_AGENTS_CREATED_EMPTY_POOL
Agents Created Pool Rate (AGENTS_CREATED_POOL_RATE)	Frequency with which agents were created due to the agent pool being empty.	float	No	All	--	(AGENTS_CREATED_EMPTY_POOL / AGENTS_FROM_POOL) *100
Agents From Pool (AGENTS_FROM_POOL)	The number of agents assigned from the agent pool.	ulong	No	All	--	SQLM_ELM_AGENTS_FROM_POOL

Basic Information on Database Manager Interval (PI.PI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agents Registered (AGENTS_REGISTERED)	The number of agents (coordinator agents and subagents) registered with the monitored database manager instance.	ulong	No	All	--	SQLM_ELM_AGENTS_REGISTERED
Agents Registered Top (AGENTS_REGISTERED_TOP)	The maximum number of agents (coordinator agents and subagents) registered simultaneously with the database manager since startup.	ulong	No	All	--	SQLM_ELM_AGENTS_REGISTERED_TOP
Agents Waiting On Token (AGENTS_WAITING_ON_TOKEN)	The number of agents waiting for tokens to execute a transaction in the database manager.	ulong	No	All	--	SQLM_ELM_AGENTS_WAITING_ON_TOKEN
Agents Waiting Top (AGENTS_WAITING_TOP)	The largest number of agents that waited simultaneously for a token, since the database manager started.	ulong	No	All	--	SQLM_ELM_AGENTS_WAITING_TOP
Comm Private Mem (COMM_PRIVATE_MEM)	Amount of dedicated memory committed by the database manager instance at the time the snapshot was taken.	ulong	No	All	--	SQLM_ELM_COMM_PRIVATE_MEM
Cons In Exec Total (CONS_IN_EXEC_TOTAL)	Total number of applications that are connected to a database in the monitored database manager instance, and are also processing task units.	ulong	No	All	--	(REM_CONS_IN_EXEC + LOCAL_CONS_IN_EXEC)
Cons Total (CONS_TOTAL)	Total number of applications connected to monitored database manager instance or database.	ulong	No	All	--	(REM_CONS_IN + LOCAL_CONS)

Basic Information on Database Manager Interval (PI.PI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
DB2 Status (DB2_STATUS)	Current status of the database manager instance. When the database manager is running: 0 (SQLM_DB2_ACTIVE) When the database manager has stopped: 100 (This value is set by the Agent for DB2) If the value is neither 0 nor 100, refer to the DB2 manual for details.	ulong	No	All	--	SQLM_ELM_DB2_STATUS
Interval (interval)	Time for the information collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Local Cons (LOCAL_CONS)	Number of local applications connected to the database in the monitored database manager instance.	ulong	No	All	--	SQLM_ELM_LOCAL_CONS
Local Cons In Exec (LOCAL_CONS_IN_EXEC)	Number of local applications that are connected to a database in the monitored database manager instance, and are also processing task units.	ulong	No	All	--	SQLM_ELM_LOCAL_CONS_IN_EXEC
Post Threshold Hash Joins (POST_THRESHOLD_HASH_JOINS)	Total number of times that a hash join heap request was limited because the shared or dedicated sort heap space was concurrently used.	ulong	No	All	--	SQLM_ELM_POST_THRESHOLD_HASH_JOINS
Product Name (PRODUCT_NAME)	Detailed version information on the currently executing DB2 instance.	string(48)	No	All	--	SQLM_ELM_PRODUCT_NAME
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always PI.	char(8)	No	All	--	Agent Collector

Basic Information on Database Manager Interval (PI_PI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Rem Cons In (REM_CONS_IN)	Number of connections started from a remote client to the monitored database manager instance.	ulong	No	All	--	SQLM_ELM_REM_CONS_IN
Rem Cons In Exec (REM_CONS_IN_EXEC)	Number of remote applications that are connected to a database in the monitored database manager instance, and are also processing task units.	ulong	No	All	--	SQLM_ELM_REM_CONS_IN_EXEC
Service Level (SERVICE_LEVEL)	Current corrected service level for the DB2 instance.	string(48)	No	All	--	SQLM_ELM_SERVICE_LEVEL
Sort Heap Allocated (SORT_HEAP_ALLOCATED)	The total number of sort heap space pages allocated to all sort operations at the selected level, at the time the snapshot was taken.	ulong	No	All	--	SQLM_ELM_SORT_HEAP_ALLOCATED

2.10.5 Bufferpool Stat on Database (PD_DBPD)

Function

The Bufferpool Stat on Database (PD_DBPD) record stores information about the buffer pool on the database level.

Table 2.244 Bufferpool Stat on Database (PD_DBPD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of the database.

Record Size

- Fixed part: 825 bytes
- Variable part: 0 bytes

Table 2.245 Bufferpool Stat on Database (PD_DBPD) Fields

Bufferpool Stat on Database (PD_DBPD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_ BOOT_TIME
Pool Async Data Reads (POOL_ASYNC_DATA _READS)	Number of asynchronous page reads into the buffer pool.	ulong	No	All	--	SQLM_ELM_POOL_A SYNC_DATA_READS
Pool Async Data Reads Rate (POOL_ASYNC_DATA _READS_RATE)	Ratio of the prefetcher's asynchronous data page reads into the buffer pool to the number of read requests requiring I/O for entering data pages into the buffer pool.	float	No	All	--	(POOL_ASYNC_DATA _READS / POOL_DATA_P_REA DS) * 100
Pool Async Data Writes (POOL_ASYNC_DATA _WRITES)	The number of physical writes of buffer pool data pages to disk, written by the asynchronous page cleaner or the prefetcher.	ulong	No	All	Y	SQLM_ELM_POOL_A SYNC_DATA_WRITE S
Pool Async Data Writes Rate (POOL_ASYNC_DATA _WRITES_RATE)	Ratio of physical disk writes for buffer pool data pages written by the asynchronous page cleaner or prefetcher, to the number of physical disk writes for buffer pool data pages.	float	No	All	--	(POOL_ASYNC_DATA _WRITES / POOL_DATA_WRITE S) * 100
Pool Async Index Reads (POOL_ASYNC_INDE X_READS)	Number of asynchronous index page reads by the prefetcher into the buffer pool.	ulong	No	All	--	SQLM_ELM_POOL_A SYNC_INDEX_READ S
Pool Async Index Reads Rate (POOL_ASYNC_INDE X_READS_RATE)	Ratio of asynchronous index page reads by the prefetcher into the buffer pool, to the number of physical read requests to enter index pages into the buffer pool.	float	No	All	--	(POOL_ASYNC_INDE X_READS / POOL_INDEX_P_RE ADS) * 100

Bufferpool Stat on Database (PD_DBPD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Async Index Writes (POOL_ASYNC_INDEX_WRITES)	Number of physical disk writes for buffer pool index pages by the asynchronous page cleaner or the prefetcher.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_INDEX_WRITES
Pool Async Index Writes Rate (POOL_ASYNC_INDEX_WRITES_RATE)	Ratio of physical disk writes for buffer pool index pages by the asynchronous page cleaner or the prefetcher, to the number of physical disk writes for buffer pool index pages.	float	No	All	--	(POOL_ASYNC_INDEX_WRITES / POOL_INDEX_WRITES) * 100
Pool Async Read Time (POOL_ASYNC_READ_TIME)	Total elapsed time that was required by the database manager's prefetcher for read operations.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_READ_TIME
Pool Async Read Time Avg (POOL_ASYNC_READ_TIME_AVG)	Average of the total elapsed time that was required by the database manager's prefetcher for read operations.	float	No	All	--	POOL_ASYNC_READ_TIME / (POOL_ASYNC_DATA_READS + POOL_ASYNC_INDEX_READS)
Pool Async Total Reads (POOL_ASYNC_TOTAL_READS)	Total of data pages and index pages read in asynchronous mode by the prefetcher into the buffer pool.	ulong	No	All	--	POOL_ASYNC_DATA_READS + POOL_ASYNC_INDEX_READS
Pool Async Total Writes (POOL_ASYNC_TOTAL_WRITES)	Number of physical disk writes for buffer pool data pages or index pages by the asynchronous page cleaner or the prefetcher.	ulong	No	All	--	POOL_ASYNC_DATA_WRITES + POOL_ASYNC_INDEX_WRITES
Pool Async Write Time (POOL_ASYNC_WRITE_TIME)	Total elapsed time, for writing buffer pool data pages or index pages from the buffer pool to disk, that was required by the page cleaner of the database manager.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_WRITE_TIME

Bufferpool Stat on Database (PD_DBPD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Async Write Time Avg (POOL_ASYNC_WRITE_TIME_AVG)	Average of the total elapsed time that was required by the database manager's page cleaner for writing data pages or index pages from the buffer pool to disk.	float	No	All	--	POOL_ASYNC_WRITE_TIME / (POOL_ASYNC_DATA_WRITES + POOL_ASYNC_INDEX_WRITES)
Pool Data From Estore (POOL_DATA_FROM_ESTORE)	Number of data pages copied from extended storage to the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_FROM_ESTORE
Pool Data Hit Rate (POOL_DATA_HIT_RATE)	Data page hit rate.	float	No	All	--	(1 - (POOL_DATA_P_READS / POOL_DATA_L_READS)) * 100
Pool Data L Reads (POOL_DATA_L_READS)	Number of logical read requests for data pages that passed through the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_L_READS
Pool Data P Reads (POOL_DATA_P_READS)	Number of read requests for which I/O was required to enter data pages into the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_P_READS
Pool Data To Estore (POOL_DATA_TO_ESTORE)	Number of data pages copied from the buffer pool to extended storage.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_TO_ESTORE
Pool Data Writes (POOL_DATA_WRITES)	Number of physical disk writes for buffer pool data pages.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_WRITES
Pool Drty PG Steal Clns (POOL_DRTY_PG_STEAL_CLNS)	Number of page cleaner calls for synchronous writes required by database victim buffer replacement.	ulong	No	All	Y	SQLM_ELM_POOL_DRTY_PG_STEAL_CLNS
Pool Drty PG Steal Clns Rate (POOL_DRTY_PG_STEAL_CLNS_RATE)	Ratio of the number of page cleaner calls for synchronous writes required by database victim buffer replacement, to the total number of cleaner calls.	float	No	All	--	POOL_DRTY_PG_STEAL_CLNS / (POOL_DRTY_PG_STEAL_CLNS + POOL_DRTY_PG_THRSH_CLNS + POOL_LSN_GAP_CLNS)

Bufferpool Stat on Database (PD_DBPD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Drty PG Thrsh Clns (POOL_DRTY_PG_THRSH_CLNS)	Number of page cleaner calls due to the buffer pool reaching the dirty page threshold for the database.	ulong	No	All	Y	SQLM_ELM_POOL_DRTY_PG_THRSH_CLNS
Pool Index From Estore (POOL_INDEX_FROM_ESTORE)	Number of buffer pool index pages copied from extended storage.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_FROM_ESTORE
Pool Index Hit Rate (POOL_INDEX_HIT_RATE)	Index page hit rate.	float	No	All	--	$(1 - (\text{POOL_INDEX_P_READS} / \text{POOL_INDEX_L_READS})) * 100$
Pool Index L Reads (POOL_INDEX_L_READS)	Number of logical read requests for index pages that passed through the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_L_READS
Pool Index P Reads (POOL_INDEX_P_READS)	Number of physical read requests to enter index pages into the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_P_READS
Pool Index To Estore (POOL_INDEX_TO_ESTORE)	Number of index pages copied from the buffer pool to extended storage.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_TO_ESTORE
Pool Index Writes (POOL_INDEX_WRITES)	Number of physical disk writes for buffer pool index pages.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_WRITES
Pool Lsn Gap Clns (POOL_LSN_GAP_CLNS)	Number of times the page cleaner was called because the logging space in use reached the defined standard for the database.	ulong	No	All	Y	SQLM_ELM_POOL_LSN_GAP_CLNS
Pool Read Time (POOL_READ_TIME)	Total time for read request processing, where physical reads of data or index pages, from a disk or the buffer pool, were necessary.	ulong	No	All	Y	SQLM_ELM_POOL_READ_TIME

Bufferpool Stat on Database (PD_DBPD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Read Time Avg (POOL_READ_TIME_AVG)	Average time for read request processing, where physical reads of data or index pages, from a disk or the buffer pool, were necessary.	float	No	All	--	POOL_READ_TIME / (POOL_DATA_P_READS + POOL_INDEX_P_READS)
Pool Total Hit Rate (POOL_TOTAL_HIT_RATE)	Total buffer pool hit rate.	float	No	All	--	(1 - ((POOL_DATA_P_READS + POOL_INDEX_P_READS) / (POOL_DATA_L_READS + POOL_INDEX_L_READS))) * 100
Pool Total Writes (POOL_TOTAL_WRITES)	Number of disk writes from the buffer pool.	ulong	No	All	--	POOL_DATA_WRITES + POOL_INDEX_WRITES
Pool Write Time (POOL_WRITE_TIME)	Total time taken for physical writes of data pages or index pages from the buffer pool to disk.	ulong	No	All	Y	SQLM_ELM_POOL_WRITE_TIME
Pool Write Time Avg (POOL_WRITE_TIME_AVG)	Average time taken for physical writes of data pages or index pages from the buffer pool to disk.	float	No	All	--	POOL_WRITE_TIME / (POOL_DATA_WRITES + POOL_INDEX_WRITES)
Record Time (RECORD_TIME)	Collection end time for performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DBPD.	char(8)	No	All	--	Agent Collector

2.10.6 Bufferpool Stat on Database Interval (PI_DBPI)

Function

The Bufferpool Stat on Database Interval (PI_DBPI) record stores basic information about the buffer pool on the database level, using a constant interval as a unit.

Table 2.246 Bufferpool Stat on Database Interval (PI_DBPI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 969 bytes
- Variable part: 0 bytes

Table 2.247 Bufferpool Stat on Database Interval (PI_DBPI) Fields

Bufferpool Stat on Database Interval (PI_DBPI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_ BOOT_TIME
Pool Async Data Reads (POOL_ASYNC_DATA _READS)	Number of asynchronous page reads into the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_A SYNC_DATA_READS
Pool Async Data Reads Rate (POOL_ASYNC_DATA _READS_RATE)	Ratio of the prefetcher's asynchronous data page reads into the buffer pool to the number of read requests requiring I/O for entering data pages into the buffer pool.	float	No	All	--	(POOL_ASYNC_DATA _READS / POOL_DATA_P_REA DS) * 100
Pool Async Data Writes (POOL_ASYNC_DATA _WRITES)	The number of physical writes of buffer pool data pages to disk, written by the asynchronous page cleaner or the prefetcher.	ulong	Yes	All	Y	SQLM_ELM_POOL_A SYNC_DATA_WRITE S
Pool Async Data Writes Rate (POOL_ASYNC_DATA _WRITES_RATE)	Ratio of physical disk writes for buffer pool data pages written by the asynchronous page cleaner or prefetcher, to the number of physical disk writes for buffer pool data pages.	float	No	All	--	(POOL_ASYNC_DATA _WRITES / POOL_DATA_WRITE S) * 100
Pool Async Index Reads (POOL_ASYNC_INDE X_READS)	Number of asynchronous index page reads by the prefetcher into the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_A SYNC_INDEX_READ S
Pool Async Index Reads Rate (POOL_ASYNC_INDE X_READS_RATE)	Ratio of asynchronous index page reads by the prefetcher into the buffer pool, to the number of physical read requests to enter index pages into the buffer pool.	float	No	All	--	(POOL_ASYNC_INDE X_READS / POOL_INDEX_P_RE ADS) * 100

Bufferpool Stat on Database Interval (PI_DBPI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Async Index Writes (POOL_ASYNC_INDEX_WRITES)	Number of physical disk writes for buffer pool index pages by the asynchronous page cleaner or the prefetcher.	ulong	Yes	All	Y	SQLM_ELM_POOL_ASYNC_INDEX_WRITES
Pool Async Index Writes Rate (POOL_ASYNC_INDEX_WRITES_RATE)	Ratio of physical disk writes for buffer pool index pages by the asynchronous page cleaner or the prefetcher, to the number of physical disk writes for buffer pool index pages.	float	No	All	--	(POOL_ASYNC_INDEX_WRITES / POOL_INDEX_WRITES) * 100
Pool Async Read Time (POOL_ASYNC_READ_TIME)	Total elapsed time that was required by the database manager's prefetcher for read operations.	ulong	Yes	All	Y	SQLM_ELM_POOL_ASYNC_READ_TIME
Pool Async Read Time Avg (POOL_ASYNC_READ_TIME_AVG)	Average of the total elapsed time that was required by the database manager's prefetcher for read operations.	float	No	All	--	POOL_ASYNC_READ_TIME / (POOL_ASYNC_DATA_READS + POOL_ASYNC_INDEX_READS)
Pool Async Total Reads (POOL_ASYNC_TOTAL_READS)	Total of data pages and index pages read in asynchronous mode by the prefetcher into buffer pool.	ulong	Yes	All	--	POOL_ASYNC_DATA_READS + POOL_ASYNC_INDEX_READS
Pool Async Total Writes (POOL_ASYNC_TOTAL_WRITES)	Number of physical disk writes for buffer pool data pages or index pages by the asynchronous page cleaner or the prefetcher.	ulong	Yes	All	--	POOL_ASYNC_DATA_WRITES + POOL_ASYNC_INDEX_WRITES
Pool Async Write Time (POOL_ASYNC_WRITE_TIME)	Total elapsed time, for writing buffer pool data pages or index pages from the buffer pool to disk, that was required by the page cleaner of the database manager.	ulong	Yes	All	Y	SQLM_ELM_POOL_ASYNC_WRITE_TIME

Bufferpool Stat on Database Interval (PI_DBPI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Async Write Time Avg (POOL_ASYNC_WRITE_TIME_AVG)	Average of the total elapsed time that was required by the database manager's page cleaner for writing data pages or index pages from the buffer pool to disk.	float	No	All	--	POOL_ASYNC_WRITE_TIME / (POOL_ASYNC_DATA_WRITES + POOL_ASYNC_INDEX_WRITES)
Pool Data From Estore (POOL_DATA_FROM_ESTORE)	Number of data pages copied from extended storage to the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_DATA_FROM_ESTORE
Pool Data Hit Rate (POOL_DATA_HIT_RATE)	Data page hit rate.	float	No	All	--	(1 - (POOL_DATA_P_READS / POOL_DATA_L_READS)) * 100
Pool Data L Reads (POOL_DATA_L_READS)	Number of logical read requests for data pages that passed through the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_DATA_L_READS
Pool Data P Reads (POOL_DATA_P_READS)	Number of read requests for which I/O was required to enter data pages into the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_DATA_P_READS
Pool Data To Estore (POOL_DATA_TO_ESTORE)	Number of data pages copied from the buffer pool to extended storage.	ulong	Yes	All	Y	SQLM_ELM_POOL_DATA_TO_ESTORE
Pool Data Writes (POOL_DATA_WRITES)	Number of physical disk writes for buffer pool data pages.	ulong	Yes	All	Y	SQLM_ELM_POOL_DATA_WRITES
Pool Drty PG Steal Clns (POOL_DRTY_PG_STEAL_CLNS)	Number of page cleaner calls for synchronous writes required by database victim buffer replacement.	ulong	Yes	All	Y	SQLM_ELM_POOL_DRTY_PG_STEAL_CLNS
Pool Drty PG Steal Clns Rate (POOL_DRTY_PG_STEAL_CLNS_RATE)	Ratio of the number of page cleaner calls for synchronous writes required by database victim buffer replacement, to the total number of cleaner calls.	float	No	All	--	POOL_DRTY_PG_STEAL_CLNS / (POOL_DRTY_PG_STEAL_CLNS + POOL_DRTY_PG_THRESHOLD_CLNS + POOL_LSN_GAP_CLNS)

Bufferpool Stat on Database Interval (PI_DBPI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Drty PG Thrsh Clns (POOL_DRTY_PG_TH RSH_CLNS)	Number of page cleaner calls due to the buffer pool reaching the dirty page threshold for the database.	ulong	Yes	All	Y	SQLM_ELM_POOL_D RTY_PG_THRSH_CL NS
Pool Index From Estore (POOL_INDEX_FROM ESTORE)	Number of buffer pool index pages copied from extended storage.	ulong	Yes	All	Y	SQLM_ELM_POOL_I NDEX_FROM_ESTOR E
Pool Index Hit Rate (POOL_INDEX_HIT_ RATE)	Index page hit rate.	float	No	All	--	(1 - (POOL_INDEX_P_RE ADS / POOL_INDEX_L_RE ADS)) * 100
Pool Index L Reads (POOL_INDEX_L_RE ADS)	Number of logical read requests for index pages that passed through the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_I NDEX_L_READS
Pool Index P Reads (POOL_INDEX_P_RE ADS)	Number of physical read requests to enter index pages into the buffer pool.	ulong	Yes	All	Y	SQLM_ELM_POOL_I NDEX_P_READS
Pool Index To Estore (POOL_INDEX_TO_E STORE)	Number of index pages copied from the buffer pool to extended storage.	ulong	Yes	All	Y	SQLM_ELM_POOL_I NDEX_TO_ESTORE
Pool Index Writes (POOL_INDEX_WRIT ES)	Number of physical disk writes for buffer pool index pages.	ulong	Yes	All	Y	SQLM_ELM_POOL_I NDEX_WRITES
Pool Lsn Gap Clns (POOL_LSN_GAP_CL NS)	Number of times the page cleaner was called because the logging space in use has reached the defined standard for the database.	ulong	Yes	All	Y	SQLM_ELM_POOL_L SN_GAP_CLNS
Pool Read Time (POOL_READ_TIME)	Total time for read request processing, where physical reads of data or index pages, from a disk or the buffer pool, were necessary.	ulong	Yes	All	Y	SQLM_ELM_POOL_R EAD_TIME

Bufferpool Stat on Database Interval (PI_DBPI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Read Time Avg (POOL_READ_TIME_AVG)	Average time for read request processing, where physical reads of data or index pages, from a disk or the buffer pool, were necessary.	float	No	All	--	POOL_READ_TIME / (POOL_DATA_P_READS + POOL_INDEX_P_READS)
Pool Total Hit Rate (POOL_TOTAL_HIT_RATE)	Total buffer pool hit rate.	float	No	All	--	(1 - ((POOL_DATA_P_READS + POOL_INDEX_P_READS) / (POOL_DATA_L_READS + POOL_INDEX_L_READS))) * 100
Pool Total Writes (POOL_TOTAL_WRITES)	Number of disk writes from the buffer pool.	ulong	Yes	All	--	POOL_DATA_WRITES + POOL_INDEX_WRITES
Pool Write Time (POOL_WRITE_TIME)	Total time taken for physical writes of data pages or index pages from the buffer pool to disk.	ulong	Yes	All	Y	SQLM_ELM_POOL_WRITE_TIME
Pool Write Time Avg (POOL_WRITE_TIME_AVG)	Average time taken for physical writes of data pages or index pages from the buffer pool to disk.	float	No	All	--	POOL_WRITE_TIME / (POOL_DATA_WRITES + POOL_INDEX_WRITES)
Record Time (RECORD_TIME)	Collection end time for performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DBPI.	char(8)	No	All	--	Agent Collector

2.10.7 Cache on Application (PD_DCAA)

Function

The Cache on Application (PD_DCAA) record stores cache information on the application level. This is a multi-instance record.

Table 2.248 Cache on Application (PD_DCAA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 681 bytes
- Variable part: 368 bytes

Table 2.249 Cache on Application (PD_DCAA) Fields

Cache on Application (PD_DCAA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agent Id (AGENT_ID)	Application specific ID.	ulong	No	All	--	SQLM_ELM_AGE NT_ID
Appl Id (APPL_ID)	ID for an application when it connects to a database of the database manager.	string (33)	No	All	--	SQLM_ELM_AP PL_ID
Appl Name (APPL_NAME)	Name of the application that is being executed on the client.	string (257)	No	All	--	SQLM_ELM_AP PL_NAM
Auth Id (AUTH_ID)	Authorization ID of the user who called the application that is being monitored.	string (33)	No	All	--	SQLM_ELM_AU TH_ID
Cat Cache Inserts (CAT_CACHE_INSER TS)	Number of times that the system tried to insert a table descriptor or permission information in the catalog cache.	ulong	No	All	--	SQLM_ELM_CA T_CACHE_INS ERTS
Cat Cache Lookups (CAT_CACHE_LOOKU PS)	Number of lookups in the catalog cache for table descriptor information or permission information.	ulong	No	All	--	SQLM_ELM_CA T_CACHE_LOO KUPS
Cat Cache Overflows (CAT_CACHE_OVERF LOWS)	Number of times the catalog cache overflowed out of the allocated memory environment.	ulong	No	All	--	SQLM_ELM_CA T_CACHE_OVE RFLWS
Catcache Hit Rate (CATCACHE_HIT_RA TE)	Catalog cache hit rate.	float	No	All	--	(1 - (CAT_CACHE_I NSERTS / CAT_CACHE_L OOKUPS)) * 100
DB Name (DB_NAME)	Real name of the database where the information is collected, or real name of the database at the application connection target.	string (9)	No	All	--	SQLM_ELM_DB _NAME
Interval (INTERVAL)	Time for information collected (seconds).	ulong	No	All	--	RECORD_TIME - CURRENT_SYS TEM_BOOT_TI ME
Num Assoc Agents (NUM_ASSOC_AGE NTS)	Number of subagents associated with one application.	ulong	No	All	--	SQLM_ELM_NU M_ASSOC_AGE NTS

Cache on Application (PD_DCAA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pkg Cache Hit Rate (PKG_CACHE_HIT_RATE)	Package cache hit rate.	float	No	All	--	(1- (PKG_CACHE_INSERTS / PKG_CACHE_LOOKUPS)) * 100
Pkg Cache Inserts (PKG_CACHE_INSERTS)	Number of times package cache inserts were necessary because the requested section could not be used.	ulong	No	All	--	SQLM_ELM_PKG_CACHE_INSERTS
Pkg Cache Lookups (PKG_CACHE_LOOKUPS)	Number of section and package searches in the package cache that were performed by applications.	ulong	No	All	--	SQLM_ELM_PKG_CACHE_LOOKUPS
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DCAA.	char (8)	Yes	All	--	Agent Collector

2.10.8 Cache on Database (PD_DCAD)

Function

The Cache on Database (PD_DCAD) record stores information about the cache on the database level.

Table 2.250 Cache on Database (PD_DCAD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 729 bytes
- Variable part: 0 bytes

Table 2.251 Cache on Database (PD_DCAD) Fields

Cache on Database (PD_DCAD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Cat Cache Inserts (CAT_CACHE_INSERTS)	Number of times that the system tried to insert a table descriptor or permission information into the catalog cache.	ulong	No	All	--	SQLM_ELM_CAT_CACHE_INSERTS
Cat Cache Lookups (CAT_CACHE_LOOKUPS)	Number of lookups in the catalog cache for table descriptor information or permission information.	ulong	No	All	--	SQLM_ELM_CAT_CACHE_LOOKUPS
Cat Cache Needed Minisize (CAT_CACHE_NEEDED_MINISIZE)	Minimum required catalog cache size in page (4 KB) units.	ulong	No	All	--	(CAT_CACHE_SIZE_TOP + 4,095) / 4,096 + 0.9 (the result is to be rounded up to the nearest integer)
Cat Cache Overflows (CAT_CACHE_OVERFLOW)	Number of times the catalog cache has overflowed out of the allocated memory environment.	ulong	No	All	--	SQLM_ELM_CAT_CACHE_OVERFLOW
Cat Cache Size Top (CAT_CACHE_SIZE_TOP)	Maximum size reached by the catalog cache, in bytes.	ulong	No	All	Y	SQLM_ELM_CAT_CACHE_SIZE_TOP
Catcache Hit Rate (CATCACHE_HIT_RATE)	Catalog cache hit rate.	float	No	All	--	(1 - (CAT_CACHE_INSERTS / CAT_CACHE_LOOKUPS)) * 100
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Pkg Cache Hit Rate (PKG_CACHE_HIT_RATE)	Package cache hit rate.	float	No	All	--	(1 - (PKG_CACHE_INSERTS / PKG_CACHE_LOOKUPS)) * 100
Pkg Cache Inserts (PKG_CACHE_INSERTS)	Number of occurrences where package cache inserts were necessary because the requested section could not be used.	ulong	No	All	--	SQLM_ELM_PKG_CACHE_INSERTS

Cache on Database (PD_DCAD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pkg Cache Lookups (PKG_CACHE_LOOKUPS)	The number of section and package searches in the package cache that were performed by applications.	ulong	No	All	--	SQLM_ELM_PKG_CACHE_LOOKUPS
Pkg Cache Needed Minisize (PKG_CACHE_NEEDED_MINISIZE)	Minimum package cache size required, in page (4 KB) units.	ulong	No	All	--	(PKG_CACHE_SIZE _TOP + 4,095) / 4,096 + 0.9 (the result is to be rounded up to the nearest integer)
Pkg Cache Num Overflows (PKG_CACHE_NUM_OVERFLOW)	Number of times the package cache has overflowed out of the allocated memory environment.	ulong	No	All	--	SQLM_ELM_PKG_CACHE_NUM_OVERFLOW
Pkg Cache Size Top (PKG_CACHE_SIZE_TOP)	Maximum size reached by the package cache, in bytes.	ulong	No	All	Y	SQLM_ELM_PKG_CACHE_SIZE_TOP
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DCAD.	char(8)	No	All	--	Agent Collector

2.10.9 Cache on Database Interval (PI_DCAI)

Function

The Cache on Database Interval (PI_DCAI) record stores information about the cache on the database level, using a constant interval as a unit.

Table 2.252 Cache on Database Interval (PI_DCAI) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	Yes	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 753 bytes
- Variable part: 0 bytes

Table 2.253 Cache on Database Interval (PI_DCAI) Fields

Cache on Database Interval (PI_DCAI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Cat Cache Inserts (CAT_CACHE_INSERTS)	Number of times that the system tried to insert a table descriptor or permission information into the catalog cache.	ulong	Yes	All	--	SQLM_ELM_CAT_CACHE_INSERTS
Cat Cache Lookups (CAT_CACHE_LOOKUPS)	Number of lookups in the catalog cache for table descriptor information or permission information.	ulong	Yes	All	--	SQLM_ELM_CAT_CACHE_LOOKUPS

Cache on Database Interval (PI_DCAI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Cat Cache Needed Minisize (CAT_CACHE_NEEDED_MINISIZE)	Minimum required catalog cache size in page (4 KB) units.	ulong	Yes	All	--	(CAT_CACHE_SIZE_TOP + 4,095) / 4,096 + 0.9 (the result is to be rounded up to the nearest integer)
Cat Cache Overflows (CAT_CACHE_OVERFLOW)	Number of times the catalog cache has overflowed out of the allocated memory environment.	ulong	Yes	All	--	SQLM_ELM_CAT_CACHE_OVERFLOW
Cat Cache Size Top (CAT_CACHE_SIZE_TOP)	Maximum size reached by the catalog cache, in bytes.	ulong	Yes	All	Y	SQLM_ELM_CAT_CACHE_SIZE_TOP
Catcache Hit Rate (CATCACHE_HIT_RATE)	Catalog cache hit rate.	float	No	All	--	(1 - (CAT_CACHE_INSERTS / CAT_CACHE_LOOKUPS)) * 100
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Pkg Cache Hit Rate (PKG_CACHE_HIT_RATE)	Package cache hit rate.	float	No	All	--	(1 - (PKG_CACHE_INSERTS / PKG_CACHE_LOOKUPS)) * 100
Pkg Cache Inserts (PKG_CACHE_INSERTS)	Total number of occurrences where package cache inserts were necessary because the requested section could not be used.	ulong	Yes	All	--	SQLM_ELM_PKG_CACHE_INSERTS
Pkg Cache Lookups (PKG_CACHE_LOOKUPS)	The number of section and package searches in the package cache that were performed by applications.	ulong	Yes	All	--	SQLM_ELM_PKG_CACHE_LOOKUPS

Cache on Database Interval (PI_DCAI)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pkg Cache Needed Minisize (PKG_CACHE_NEEDED_MINISIZE)	Minimum package cache size required, in page (4 KB) units.	ulong	Yes	All	--	(PKG_CACHE_SIZE_TOP + 4,095) / 4,096 + 0.9 (the result is to be rounded up to the nearest integer)
Pkg Cache Num Overflows (PKG_CACHE_NUM_OVERFLOW)	Number of times the package cache has overflowed out of the allocated memory environment.	ulong	Yes	All	--	SQLM_ELM_PKG_CACHE_NUM_OVERFLOW
Pkg Cache Size Top (PKG_CACHE_SIZE_TOP)	Maximum size reached by the package cache, in bytes.	ulong	Yes	All	Y	SQLM_ELM_PKG_CACHE_SIZE_TOP
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DCAI.	char(8)	No	All	--	Agent Collector

2.10.10 DB2 Configuration (PD_DCFE)

Function

The DB2 Configuration (PD_DCFE) record stores information about DB2 configuration parameters.

Table 2.254 DB2 Configuration (PD_DCFE) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	3600	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of the instance.

Record Size

- Fixed part: 757 bytes
- Variable part: 0 bytes

Table 2.255 DB2 Configuration (PD_DCFE) Fields

DB2 Configuration (PD_DCFE)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
App Ctl Heap SZ (APP_CTL_HEAP_SZ)	Application control heap size, in page (4 KB) units.	word	No	All	--	SQLF_DBTN_APP_CTL_HEAP_SZ
Appgroup Mem SZ (APPGROUP_MEM_SZ)	Maximum size of the application group memory set, in page (4 KB) units.	ulong	No	All	--	SQLF_DBTN_APPGROUP_MEM_SZ
ApplheapSZ (APPLHEAPSZ)	Application heap size, in page (4 KB) units.	word	No	All	--	SQLF_DBTN_APPLHEAPSZ
Catalogcache SZ (CATALOGCACHE_SZ)	Catalog cache size, in page (4 KB) units.	long	No	All	--	SQLF_DBTN_CATALOGCACHE_SZ

DB2 Configuration (PD_DCFE)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Chngpgs Thresh (CHNGPGS_THRESH)	Threshold value for the number of changed pages.	word	No	All	--	SQLF_DBTN_CHNGPGS_THRESH
Database Memory (DATABASE_MEMORY)	Database shared memory size, in page (4 KB) units.	ulong	No	All	--	SQLF_DBTN_DATABASE_MEMORY
Dbheap (DBHEAP)	Database heap, in page (4 KB) units.	ulong	No	All	--	SQLF_DBTN_DBHEAP
Dft Prefetch SZ (DFT_PREFETCH_SZ)	Default prefetch size.	short	No	All	--	SQLF_DBTN_DFT_PREFETCH_SZ
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Locklist (LOCKLIST)	Maximum storage for lock lists, in page (4 KB) units.	ulong	No	All	--	SQLF_DBTN_LOCKLIST
LogbufSZ (LOGBUFSZ)	Log buffer size, in page (4 KB) units.	word	No	All	--	SQLF_DBTN_LOGBUFSZ
Max Connections (MAX_CONNECTIONS)	Maximum number of client connections.	long	No	All	--	SQLF_KTN_MAX_CONNECTIONS
Max Coordagents (MAX_COORDAGENTS)	Maximum number of coordinator agents.	long	No	All	--	SQLF_KTN_MAX_COORDAGENTS
Maxappls (MAXAPPLS)	Maximum number of active applications.	word	No	All	--	SQLF_DBTN_MAXAPPLS
Maxcagents (MAXCAGENTS)	Maximum number of concurrent agents.	long	No	All	--	SQLF_KTN_MAXCAGENTS
Maxfilop (MAXFILOP)	Maximum number of open database files for each application.	word	No	All	--	SQLF_DBTN_MAXFILOP
Maxlocks (MAXLOCKS)	Maximum lock list percentage before escalation.	word	No	All	--	SQLF_DBTN_MAXLOCKS
Maxtotfilop (MAXTOTFILOP)	Maximum total number of open files.	word	No	All	--	SQLF_KTN_MAXTOTFILOP
Min Priv Mem (MIN_PRIV_MEM)	Minimum amount of committed memory, in page (4 KB) units.	ulong	No	All	--	SQLF_KTN_MIN_PRIV_MEM

DB2 Configuration (PD_DCFE)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Mon Heap SZ (MON_HEAP_SZ)	Heap size for the database system monitor, in page (4 KB) units.	word	No	All	--	SQLF_KTN_MON_HEAP_SZ
Num Iocleaners (NUM_IOCLEANERS)	Number of asynchronous page cleaners.	word	No	All	--	SQLF_DBTN_NUM_IOCLEANERS
Num Ioservers (NUM_IOSERVERS)	Number of I/O servers.	word	No	All	--	SQLF_DBTN_NUM_IOSERVERS
Num Poolagents (NUM_POOLAGENTS)	Size of the agent pool.	long	No	All	--	SQLF_KTN_NUM_POOLAGENTS
PckcacheSZ (PCKCACHESZ)	Size of the package cache, in page (4 KB) units. Since this field is in ulong format, (-1) is displayed as (4294967295).	ulong	No	All	--	SQLF_DBTN_PCKCACHESZ
Query Heap SZ (QUERY_HEAP_SZ)	Query heap size.	long	No	All	--	SQLF_KTN_QUERY_HEAP_SZ
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DCFE.	char(8)	No	All	--	Agent Collector
Sortheap (SORTHEAP)	Sort heap size, in page (4 KB) units.	ulong	No	All	--	SQLF_DBTN_SORTHEAP

2.10.11 Sort Status on Database (PD_DSOD)

Function

The Sort Status on Database (PD_DSOD) record stores information about sorting on the database level.

Table 2.256 Sort Status on Database (PD_DSOD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While one or more applications are connected to the database.

Record Size

- Fixed part: 733 bytes
- Variable part: 0 bytes

Table 2.257 Sort Status on Database (PD_DSOD) Fields

Sort Status on Database (PD_DSOD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Active Sorts (ACTIVE_SORTS)	Number of sorts in the database for which the sort heap is currently allocated.	ulong	No	All	--	SQLM_ELM_ACTIVE_SORTS
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DSOD.	char(8)	No	All	--	Agent Collector
Sheapthres (SHEAPTHRES)	Sort heap threshold.	ulong	No	All	--	SQLF_KTN_SHEAPTHRES
Sheapthres Shr (SHEAPTHRES_SHR)	Sort heap threshold for shared sorts.	ulong	No	All	--	SQLF_DBTN_SHEAPTHRES_SHR
Sort Heap Allocated (SORT_HEAP_ALLOCATED)	Total number of sort heap space pages allocated to all sort operations for the selected level at the time the snapshot was taken.	ulong	No	All	--	SQLM_ELM_SORT_HEAP_ALLOCATED
Sort Heap Allocated Avg (SORT_HEAP_ALLOCATED_AVG)	Average number of pages for sort heap space allocated to all sorts at the selected level, when snapshots are taken.	float	No	All	--	SORT_HEAP_ALLOCATED / ACTIVE_SORTS
Sort Overflows (SORT_OVERFLOWES)	Total number of sorts which may need temporary memory disk space, as a result of using up the sort heap.	ulong	No	All	Y	SQLM_ELM_SORT_OVERFLOWES
Sort Overflows Rate (SORT_OVERFLOWES_RATE)	Ratio of sorts which may need temporary memory disk space, as a result of using up the sort heap.	float	No	All	--	(SORT_OVERFLOWES / TOTAL_SORTS) * 100
Sort Shrheap Allocated (SORT_SHRHEAP_ALLOCATED)	Currently allocated sort shared heap.	ulong	No	All	--	SQLM_ELM_SORT_SHRHEAP_ALLOCATED

Sort Status on Database (PD_DSOD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Sort Shrheap Allocated Rate (SORT_SHRHEAP ALLOCATED_R ATE)	Shared sort memory usage for the database.	float	No	All	--	SHEAPTHRES_SHR != 0 ? (SORT_SHRHEAP_A LLOCATED / SHEAPTHRES_SHR) * 100 : (SORT_SHRHEAP_A LLOCATED / SHEAPTHRES) * 100
Sort Shrheap Top (SORT_SHRHEAP _TOP)	Maximum watermark for the sort shared heap.	ulong	No	All	--	SQLM_ELM_SORT_ SHRHEAP_TOP
Total Sort Time (TOTAL_SORT_T IME)	Total time elapsed for all executed sorts, in milliseconds.	ulong	No	All	--	SQLM_ELM_TOTAL _SORT_TIME
Total Sort Time Avg (TOTAL_SORT_T IME_AVG)	Average time elapsed for all executed sorts, in milliseconds.	ulong	No	All	--	TOTAL_SORT_TIM E / TOTAL_SORTS
Total Sorts (TOTAL_SORTS)	Total number of sorts executed.	ulong	No	All	Y	SQLM_ELM_TOTAL _SORTS

2.10.12 SQL Statement on Application (PD_DSQA)

Function

The SQL Statement on Application (PD_DSQA) record stores SQL Statement information on the application level. This is a multi-instance record.

Table 2.258 SQL Statement on Application (PD_DSQA) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of the database.

Record Size

- Fixed part: 681 bytes
- Variable part: 424 bytes

Table 2.259 SQL Statement on Application (PD_DSQA) Fields

SQL Statement on Application (PD_DSQA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Agent Id (AGENT_ID)	Application specific ID.	ulong	No	All	--	SQLM_ELM_A GENT_ID
Appl Id (APPL_ID)	ID for an application when it connects to a database of the database manager.	string (33)	No	All	--	SQLM_ELM_A PPL_ID
Appl Name (APPL_NAME)	Name of the application that is being executed on the client.	string (257)	No	All	--	SQLM_ELM_A PPL_NAME
Auth Id (AUTH_ID)	Authorization ID of the user who has called the application that is being monitored.	string (33)	No	All	--	SQLM_ELM_A UTH_ID

SQL Statement on Application (PD_DSQA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Commit SQL STMTS (COMMIT_SQL_STMTS)	Total number of SQL COMMIT statements attempted.	ulong	No	All	Y	SQLM_ELM_COMMIT_SQL_STMTS
DB Name (DB_NAME)	Real name of the database where the information is collected, or real name of the database at the application connection target.	string (9)	No	All	--	SQLM_ELM_DB_NAME
DDL SQL STMTS (DDL_SQL_STMTS)	Number of SQL Data Definition Language (DDL) statements executed.	ulong	No	All	Y	SQLM_ELM_DDL_SQL_STMTS
DDL SQL STMTS Rate (DDL_SQL_STMTS_RATE)	Ratio of SQL Data Definition Language (DDL) statements executed.	float	No	All	--	DDL_SQL_STMTS / (DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) * 100
Dynamic SQL STMTS (DYNAMIC_SQL_STMTS)	Number of dynamic SQL statements attempted.	ulong	No	All	Y	SQLM_ELM_DYNAMIC_SQL_STMTS
Failed SQL STMTS (FAILED_SQL_STMTS)	Number of attempted SQL statements for which failures occurred.	ulong	No	All	Y	SQLM_ELM_FAILED_SQL_STMTS
Interval (INTERVAL)	Time for information collected (seconds).	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Num Assoc Agents (NUM_ASSOC_AGENTS)	Number of subagents associated with one application.	ulong	No	All	--	SQLM_ELM_NUM_ASSOC_AGENTS
Priv Workspace Num Overflows (PRIV_WORKSPACE_NUM_OVERFLOW)	Number of times the private workspace overflowed out of the range for allocated memory.	ulong	No	All	--	SQLM_ELM_PRIV_WORKSPACE_NUM_OVERFLOW
Priv Workspace Section Inserts (PRIV_WORKSPACE_SECTION_INSERTS)	Number of times applications performed SQL section inserts into the private workspace.	ulong	No	All	--	SQLM_ELM_PRIV_WORKSPACE_SECTION_INSERTS

SQL Statement on Application (PD_DSQA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Priv Workspace Section Lookups (PRIV_WORKSPACE_SECTION_LOOKUPS)	Number of times applications performed SQL section lookups in the agent private workspace.	ulong	No	All	--	SQLM_ELM_PRIV_WORKSPACE_SECTION_LOOKUPS
Priv Workspace Size Top (PRIV_WORKSPACE_SIZE_TOP)	Maximum size attained by a private workspace.	ulong	No	All	Y	SQLM_ELM_PRIV_WORKSPACE_SIZE_TOP
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DSQA.	char(8)	Yes	All	--	Agent Collector
Rollback SQL STMTS (ROLLBACK_SQL_STMTS)	Total number of SQL ROLLBACK statements attempted.	ulong	No	All	Y	SQLM_ELM_ROLLBACK_SQL_STMTS
Select SQL STMTS (SELECT_SQL_STMTS)	Number of SQL SELECT statements.	ulong	No	All	Y	SQLM_ELM_SELECT_SQL_STMTS
Select SQL STMTS Rate (SELECT_SQL_STMTS_RATE)	Ratio of SELECT statements to all statements.	float	No	All	--	SELECT_SQL_STMTS / (DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) * 100
Shr Workspace Hit Rate (SHR_WORKSPACE_HIT_RATE)	Shared workspace hit rate.	float	No	All	--	(1 - (SHR_WORKSPACE_SECTION_INSERTS / SHR_WORKSPACE_SECTION_LOOKUPS)) * 100
Shr Workspace Num Overflows (SHR_WORKSPACE_NUM_OVERFLOW)	Number of times the shared workspace overflowed out of the range for allocated memory.	ulong	No	All	--	SQLM_ELM_SHR_WORKSPACE_NUM_OVERFLOW
Shr Workspace Section Inserts (SHR_WORKSPACE_SECTION_INSERTS)	Number of times applications performed SQL section inserts into the shared workspace.	ulong	No	All	--	SQLM_ELM_SHR_WORKSPACE_SECTION_INSERTS

SQL Statement on Application (PD_DSQA)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Shr Workspace Section Lookups (SHR_WORKSPACE_SECTION_LOOKUPS)	Number of times applications performed SQL section lookups in the shared workspace.	ulong	No	All	--	SQLM_ELM_SHR_WORKSPACE_SECTION_LOOKUPS
Shr Workspace Size Top (SHR_WORKSPACE_SIZE_TOP)	Maximum size attained by a shared workspace.	ulong	No	All	Y	SQLM_ELM_SHR_WORKSPACE_SIZE_TOP
Static SQL STMTS (STATIC_SQL_STMTS)	Number of static SQL statements attempted.	ulong	No	All	Y	SQLM_ELM_STATIC_SQL_STMTS
Throughput SQL STMTS (THROUGHPUT_SQL_STMTS)	Total number of successful SQL statements.	ulong	No	All	--	(DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) - FAILED_SQL_STMTS
UID SQL STMTS (UID_SQL_STMTS)	Number of SQL UPDATE, INSERT, and DELETE statements executed.	ulong	No	All	Y	SQLM_ELM_UID_SQL_STMTS
UID SQL STMTS Rate (UID_SQL_STMTS_RATE)	Ratio of SQL UPDATE, INSERT, and DELETE statements executed.	float	No	All	--	UID_SQL_STMTS / (DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) * 100

2.10.13 SQL Statement on Database (PD_DSQD)

Function

The SQL Statement on Database (PD_DSQD) record stores information about SQL statements on the database level.

Table 2.260 SQL Statement on Database (PD_DSQD) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

From the creation to the deletion of the database.

Record Size

- Fixed part: 765 bytes
- Variable part: 0 bytes

Table 2.261 SQL Statement on Database (PD_DSQD) Fields

SQL Statement on Database (PD_DSQD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Commit SQL STMTS (COMMIT_SQL_STMTS)	Total number of SQL COMMIT statements attempted.	ulong	No	All	Y	SQLM_ELM_COMMIT_SQL_STMTS
DDL SQL STMTS (DDL_SQL_STMTS)	Number of SQL Data Definition Language (DDL) statements executed.	ulong	No	All	Y	SQLM_ELM_DDL_SQL_STMTS
DDL SQL STMTS Rate (DDL_SQL_STMTS_RATE)	Ratio of SQL Data Definition Language (DDL) statements executed.	float	No	All	--	$\frac{DDL_SQL_STMTS}{(DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS)} * 100$

SQL Statement on Database (PD_DSQD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Dynamic SQL STMTS (DYNAMIC_SQL_STMTS)	Number of dynamic SQL statements attempted.	ulong	No	All	Y	SQLM_ELM_DYNAMIC_SQL_STMTS
Failed SQL STMTS (FAILED_SQL_STMTS)	Number of attempted SQL statements for which failures occurred.	ulong	No	All	Y	SQLM_ELM_FAILED_SQL_STMTS
Interval (interval)	Interval at which the information collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Priv Workspace Num Overflows (PRIV_WORKSPACE_NUM_OVERFLOW)	Number of times the private workspace overflowed out of the boundary for the allocated memory.	ulong	No	All	--	SQLM_ELM_PRIVATE_WORKSPACE_NUM_OVERFLOW
Priv Workspace Section Inserts (PRIV_WORKSPACE_SECTION_INSERTS)	Number of times applications performed SQL section inserts into the private workspace.	ulong	No	All	--	SQLM_ELM_PRIVATE_WORKSPACE_SECTION_INSERTS
Priv Workspace Section Lookups (PRIV_WORKSPACE_SECTION_LOOKUPS)	Number of times applications performed SQL section lookups in the agent private workspace.	ulong	No	All	--	SQLM_ELM_PRIVATE_WORKSPACE_SECTION_LOOKUPS
Priv Workspace Size Top (PRIV_WORKSPACE_SIZE_TOP)	Maximum size attained by a private workspace.	ulong	No	All	Y	SQLM_ELM_PRIVATE_WORKSPACE_SIZE_TOP
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DSQD.	char(8)	No	All	--	Agent Collector
Rollback SQL STMTS (ROLLBACK_SQL_STMTS)	Total number of SQL ROLLBACK statements attempted.	ulong	No	All	Y	SQLM_ELM_ROLLBACK_SQL_STMTS
Select SQL STMTS (SELECT_SQL_STMTS)	Number of SQL SELECT statements.	ulong	No	All	Y	SQLM_ELM_SELECT_SQL_STMTS

SQL Statement on Database (PD_DSQD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Select SQL STMTS Rate (SELECT_SQL_STMTS_RATE)	Ratio of SELECT statements to all statements.	float	No	All	--	SELECT_SQL_STMTS / (DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) * 100
Shr Workspace Hit Rate (SHR_WORKSPACE_HIT_RATE)	Shared workspace hit rate.	float	No	All	--	(1 - (SHR_WORKSPACE_SECTION_INSERTS / SHR_WORKSPACE_SECTION_LOOKUPS)) * 100
Shr Workspace Num Overflows (SHR_WORKSPACE_NUM_OVERFLOWS)	Number of times the shared workspace overflowed out of the boundary for the allocated memory.	ulong	No	All	--	SQLM_ELM_SHR_WORKSPACE_NUM_OVERFLOWS
Shr Workspace Section Inserts (SHR_WORKSPACE_SECTION_INSERTS)	Number of times applications performed SQL section inserts into the shared workspace.	ulong	No	All	--	SQLM_ELM_SHR_WORKSPACE_SECTION_INSERTS
Shr Workspace Section Lookups (SHR_WORKSPACE_SECTION_LOOKUPS)	Number of times applications performed SQL section lookups in the shared workspace.	ulong	No	All	--	SQLM_ELM_SHR_WORKSPACE_SECTION_LOOKUPS
Shr Workspace Size Top (SHR_WORKSPACE_SIZE_TOP)	Maximum size attained by a shared workspace.	ulong	No	All	Y	SQLM_ELM_SHR_WORKSPACE_SIZE_TOP
Static SQL STMTS (STATIC_SQL_STMTS)	Number of static SQL statements attempted.	ulong	No	All	Y	SQLM_ELM_STATIC_SQL_STMTS
Throughput SQL STMTS (THROUGHPUT_SQL_STMTS)	Total number of successful SQL statements.	ulong	No	All	--	(DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) - FAILED_SQL_STMTS
UID SQL STMTS (UID_SQL_STMTS)	Number of SQL UPDATE, INSERT, and DELETE statements executed.	ulong	No	All	Y	SQLM_ELM_UID_SQL_STMTS

SQL Statement on Database (PD_DSQD)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
UID SQL STMTS Rate (UID_SQL_STMTS_R ATE)	Ratio of SQL UPDATE, INSERT, and DELETE statements executed.	float	No	All	--	UID_SQL_STMTS / (DYNAMIC_SQL_STMTS + STATIC_SQL_STMTS) * 100

2.10.14 Tablespace Information on DB (PD_DTID)

Function

The Tablespace Information on DB (PD_DTID) record stores tablespace information. This is a multi-instance record.

Table 2.262 Tablespace Information on DB (PD_DTID) Default and Changeable Values

Item	Default Value	Changeable?
Collection Interval	60	Yes
Collection Offset	0	
Log	No	
LOGIF	(Blank)	

Key Fields

None

Lifetime

While the database is running.

Record Size

- Fixed part: 681 bytes
- Variable part: 335 bytes

Table 2.263 Tablespace Information on DB (PD_DTID) Fields

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Direct Read Reqs (DIRECT_READ_REQS)	Number of requests to perform a direct read of one or more sectors of data.	ulong	No	All	--	SQLM_ELM_DIRECT_READ_REQS
Direct Read Time (DIRECT_READ_TIME)	Elapsed time (in milliseconds) required to perform the direct reads.	ulong	No	All	--	SQLM_ELM_DIRECT_READ_TIME
Direct Reads (DIRECT_READS)	Number of read operations that do not use the buffer pool.	ulong	No	All	--	SQLM_ELM_DIRECT_READS
Direct Write Reqs (DIRECT_WRITE_REQS)	Number of requests to perform a direct write of one or more sectors of data.	ulong	No	All	--	SQLM_ELM_DIRECT_WRITE_REQS

Tablespace Information on DB (PD_DTIID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Direct Write Time (DIRECT_WRITE_TIME)	Elapsed time (in milliseconds) required to perform the direct writes.	ulong	No	All	--	SQLM_ELM_DIRECT_WRITE_TIME
Direct Writes (DIRECT_WRITES)	Number of write operations that do not use the buffer pool.	ulong	No	All	--	SQLM_ELM_DIRECT_WRITES
Files Closed (FILES_CLOSED)	Total number of database files closed.	ulong	No	All	--	SQLM_ELM_FILES_CLOSED
Interval (interval)	Interval at which the information is collected, in seconds.	ulong	No	All	--	RECORD_TIME - CURRENT_SYSTEM_BOOT_TIME
Pool Async Data Read Reqs (POOL_ASYNC_DATA_READ_REQS)	Number of asynchronous read requests.	ulong	No	All	--	SQLM_ELM_POOL_ASYNC_DATA_READ_REQS
Pool Async Data Reads (POOL_ASYNC_DATA_READS)	Number of pages read asynchronously into the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_DATA_READS
Pool Async Data Reads Rate (POOL_ASYNC_DATA_READS_RATE)	Ratio of the prefetcher's asynchronous data page reads into the buffer pool to the number of read requests requiring I/O for entering data pages into the buffer pool.	float	No	All	--	(POOL_ASYNC_DATA_READS / POOL_DATA_READS) * 100
Pool Async Data Writes (POOL_ASYNC_DATA_WRITES)	Number of times a buffer pool data page was physically written to disk by either an asynchronous page cleaner, or a prefetcher.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_DATA_WRITES
Pool Async Data Writes Rate (POOL_ASYNC_DATA_WRITES_RATE)	Ratio of physical disk writes for buffer pool data pages written by the asynchronous page cleaner or prefetcher, to the number of physical disk writes for buffer pool data pages.	float	No	All	--	POOL_ASYNC_DATA_WRITES / POOL_DATA_WRITES * 100
Pool Async Index Reads (POOL_ASYNC_INDEX_READS)	Number of asynchronous index page reads by the prefetcher into the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_INDEX_READS

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Async Index Reads Rate (POOL_ASYNC_INDEX_READS_RATE)	Ratio of asynchronous index page reads by the prefetcher into the buffer pool, to the number of physical read requests to enter index pages into the buffer pool.	float	No	All	--	(POOL_ASYNC_INDEX_READS / POOL_INDEX_P_READS) * 100
Pool Async Index Writes (POOL_ASYNC_INDEX_WRITES)	Number of physical disk writes for buffer pool index pages by the asynchronous page cleaner or the prefetcher.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_INDEX_WRITES
Pool Async Index Writes Rate (POOL_ASYNC_INDEX_WRITES_RATE)	Ratio of physical disk writes for buffer pool index pages by the asynchronous page cleaner or the prefetcher, to the number of physical disk writes for buffer pool index pages.	float	No	All	--	POOL_ASYNC_INDEX_WRITES / POOL_INDEX_WRITES * 100
Pool Async Read Time (POOL_ASYNC_READ_TIME)	Total elapsed time that was required by the database manager's prefetcher for read operations.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_READ_TIME
Pool Async Read Time Avg (POOL_ASYNC_READ_TIME_AVG)	Average of the total elapsed time that was required by the database manager's prefetcher for read operations.	float	No	All	--	POOL_ASYNC_READ_TIME / (POOL_ASYNC_DATA_READS + POOL_ASYNC_INDEX_READS)
Pool Async Total Reads (POOL_ASYNC_TOTAL_READS)	Total of data pages and index pages read in asynchronous mode by the prefetcher into the buffer pool.	ulong	No	All	--	POOL_ASYNC_DATA_READS + POOL_ASYNC_INDEX_READS
Pool Async Total Writes (POOL_ASYNC_TOTAL_WRITES)	Number of physical disk writes for buffer pool data pages or index pages by the asynchronous page cleaner or the prefetcher.	ulong	No	All	--	POOL_ASYNC_DATA_WRITES + POOL_ASYNC_INDEX_WRITES
Pool Async Write Time (POOL_ASYNC_WRITE_TIME)	Total elapsed time, for writing buffer pool data pages or index pages from the buffer pool to disk, that was required by the page cleaner of the database manager.	ulong	No	All	Y	SQLM_ELM_POOL_ASYNC_WRITE_TIME

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Async Write Time Avg (POOL_ASYNC_WRITE_TIME_AVG)	Average of the total elapsed time that was required by the database manager's page cleaner for writing data pages or index pages from the buffer pool to disk.	float	No	All	--	POOL_ASYNC_WRITE_TIME / (POOL_ASYNC_DATA_WRITES + POOL_ASYNC_INDEX_WRITES)
Pool Data From Estore (POOL_DATA_FROM_ESTORE)	Number of data pages copied from extended storage to the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_FROM_ESTORE
Pool Data Hit Rate (POOL_DATA_HIT_RATE)	Data page hit rate.	float	No	All	--	(1 - (POOL_DATA_P_READS / POOL_DATA_L_READS)) * 100
Pool Data L Reads (POOL_DATA_L_READS)	Number of logical read requests for data pages that passed through the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_L_READS
Pool Data P Reads (POOL_DATA_P_READS)	Number of read requests for which I/O was required to enter data pages into the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_P_READS
Pool Data To Estore (POOL_DATA_TO_ESTORE)	Number of data pages copied from the buffer pool to extended storage.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_TO_ESTORE
Pool Data Writes (POOL_DATA_WRITES)	Number of physical disk writes for buffer pool data pages.	ulong	No	All	Y	SQLM_ELM_POOL_DATA_WRITES
Pool Index From Estore (POOL_INDEX_FROM_ESTORE)	Number of buffer pool index pages copied from extended storage.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_FROM_ESTORE
Pool Index Hit Rate (POOL_INDEX_HIT_RATE)	Index page hit rate.	float	No	All	--	(1 - (POOL_INDEX_P_READS / POOL_INDEX_L_READS)) * 100
Pool Index L Reads (POOL_INDEX_L_READS)	Number of logical read requests for index pages that passed through the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_L_READS

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Pool Index P Reads (POOL_INDEX_P_READS)	Number of physical read requests to enter index pages into the buffer pool.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_P_READS
Pool Index To Estore (POOL_INDEX_TO_ESTORE)	Number of index pages copied from the buffer pool to extended storage.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_TO_ESTORE
Pool Index Writes (POOL_INDEX_WRITES)	Number of physical disk writes for buffer pool index pages.	ulong	No	All	Y	SQLM_ELM_POOL_INDEX_WRITES
Pool Read Time (POOL_READ_TIME)	Total time for read request processing, where physical reads of data or index pages, from a disk or the buffer pool, were necessary.	ulong	No	All	Y	SQLM_ELM_POOL_READ_TIME
Pool Read Time Avg (POOL_READ_TIME_AVG)	Average time for read request processing, where physical reads of data or index pages, from a disk or the buffer pool, were necessary.	float	No	All	--	$POOL_READ_TIME / (POOL_DATA_P_READS + POOL_INDEX_P_READS)$
Pool Total Hit Rate (POOL_TOTAL_HIT_RATE)	Total buffer pool hit rate.	float	No	All	--	$(1 - ((POOL_DATA_P_READS + POOL_INDEX_P_READS) / (POOL_DATA_L_READS + POOL_INDEX_L_READS))) * 100$
Pool Total Writes (POOL_TOTAL_WRITES)	Number of disk writes from the buffer pool.	ulong	No	All	--	$POOL_DATA_WRITES + POOL_INDEX_WRITES$
Pool Write Time (POOL_WRITE_TIME)	Total time taken for physical writes of data pages or index pages from the buffer pool to disk.	ulong	No	All	Y	SQLM_ELM_POOL_WRITE_TIME
Pool Write Time Avg (POOL_WRITE_TIME_AVG)	Average time taken for physical writes of data pages or index pages from the buffer pool to disk.	float	No	All	--	$POOL_WRITE_TIME / (POOL_DATA_WRITES + POOL_INDEX_WRITES)$
Record Time (RECORD_TIME)	Collection end time for the performance data stored in the record.	time_t	No	All	--	Agent Collector

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Record Type (INPUT_RECORD_TYPE)	Record name. This is always DTID.	char (8)	Yes	All	--	Agent Collector
Tablespace Content Type (TABLESPACE_CONTENT_TYPE)	Type of content in a tablespace.	unsigned char	No	All	--	SQLM_ELM_TABLESPACE_CONTENT_TYPE
Tablespace Cur Pool Id (TABLESPACE_CUR_POOL_ID)	Buffer pool identifier for a buffer pool that a tablespace is currently using.	ulong	No	All	--	SQLM_ELM_TABLESPACE_CUR_POOL_ID
Tablespace Extent Size (TABLESPACE_EXTENT_SIZE)	Extent size used by a tablespace.	ulong	No	All	--	SQLM_ELM_TABLESPACE_EXTENT_SIZE
Tablespace Free Pages (TABLESPACE_FREE_PAGES)	Total number of pages that are currently free in a tablespace.	ulong	No	All	--	SQLM_ELM_TABLESPACE_FREE_PAGES
Tablespace Id (TABLESPACE_ID)	An integer that uniquely represents a tablespace used by the current database.	ulong	No	All	--	SQLM_ELM_TABLESPACE_ID
Tablespace Min Recovery Time (TABLESPACE_MIN_RECOVERY_TIME)	A timestamp showing the earliest point in time to which a tablespace can be rolled forward.	ulong	No	All	--	SQLM_ELM_TABLESPACE_MIN_RECOVERY_TIME
Tablespace Name (TABLESPACE_NAME)	Name of a tablespace.	string [19]	No	All	--	SQLM_ELM_TABLESPACE_NAME
Tablespace Next Pool Id (TABLESPACE_NEXT_POOL_ID)	Buffer pool identifier for a buffer pool that a tablespace will use at the next database startup.	ulong	No	All	--	SQLM_ELM_TABLESPACE_NEXT_POOL_ID
Tablespace Num Containers (TABLESPACE_NUM_CONTAINERS)	Total number of containers in the tablespace.	ulong	No	All	--	SQLM_ELM_TABLESPACE_NUM_CONTAINERS
Tablespace Num Quiescers (TABLESPACE_NUM_QUIESCERS)	Number of user's quiescing the tablespace (can be in the range from 0 to 5).	ulong	No	All	--	SQLM_ELM_TABLESPACE_NUM_QUIESCERS

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Tablespace Num Ranges (TABLESPACE_NUM_RANGES)	Number of ranges (entries) in the tablespace map. This can be in the range from 1 to hundreds (but is usually less than a dozen). The tablespace map only exists for DMS tablespaces.	ulong	No	All	--	SQLM_ELM_TABLESPACE_NUM_RANGES
Tablespace Page Size (TABLESPACE_PAGE_SIZE)	Page size used by a tablespace, in bytes.	ulong	No	All	--	SQLM_ELM_TABLESPACE_PAGE_SIZE
Tablespace Page Top (TABLESPACE_PAGE_TOP)	Page in a tablespace that is holding the high-water mark.	ulong	No	All	--	SQLM_ELM_TABLESPACE_PAGE_TOP
Tablespace Pending Free Pages (TABLESPACE_PENDING_FREE_PAGES)	Number of pages in a tablespace, which would become free if all pending transactions are committed or rolled back and new space is requested for an object.	ulong	No	All	--	SQLM_ELM_TABLESPACE_PENDING_FREE_PAGES
Tablespace Prefetch Size (TABLESPACE_PREFETCH_SIZE)	Maximum number of pages the prefetcher can get from the disk at a time.	ulong	No	All	--	SQLM_ELM_TABLESPACE_PREFETCH_SIZE
Tablespace R Extents Processed (TABLESPACE_REXTENTS_PROCESSED)	Number of extents that the rebalancer has already moved since the rebalancer started or restarted (whichever is most recent).	ulong	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_EXTENTS_PROCESSED
Tablespace R Extents Remaining (TABLESPACE_REXTENTS_REMAINING)	Number of extents to be moved. This value is calculated at either the rebalancer start time or restart time (whichever is most recent).	ulong	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_EXTENTS_REMAINING
Tablespace R Last Extent Moved (TABLESPACE_R_LAST_EXTENT_MOVED)	Last extent moved by the rebalancer.	ulong	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_LAST_EXTENT_MOVED

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Tablespace Rebalancer Mode (TABLESPACE_REBALANCER_MODE)	An integer that represents whether a forward or reverse rebalance is taking place. Its values (defined in sqlmon.h) are as follows: No rebalancing taking place: SQLM_TABLESPACE_NO_REBAL Forward: SQLM_TABLESPACE_FORWARD_REBAL Reverse: SQLM_TABLESPACE_REVERSE_REBAL	unsigned char	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_MODE
Tablespace Rebalancer Priority (TABLESPACE_REBALANCER_PRIORITY)	Priority at which the rebalancer is running in the database.	ulong	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_PRIORITY
Tablespace R Restart Time (TABLESPACE_R_RESTART_TIME)	Timestamp representing when a rebalancer restarted after being paused or stopped.	string [27]	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_RESTART_TIME
Tablespace R Start Time (TABLESPACE_R_START_TIME)	Timestamp representing when a rebalancer started for the first time.	string [27]	No	All	--	SQLM_ELM_TABLESPACE_REBALANCER_START_TIME
Tablespace State (TABLESPACE_STATE)	This element describes the current state of a tablespace.	string [11]	No	All	--	SQLM_ELM_TABLESPACE_STATE
Tablespace State Change Obj Id (TABLESPACE_STATE_CHANGE_OBJ_ID)	Object that caused the tablespace state to be set to Load pending or Delete pending.	ulong	No	All	--	SQLM_ELM_TABLESPACE_STATE_CHANGE_OBJECT_ID
Tablespace Total Pages (TABLESPACE_TOTAL_PAGES)	Total number of pages in a tablespace.	ulong	No	All	--	SQLM_ELM_TABLESPACE_TOTAL_PAGES
Tablespace Type (TABLESPACE_TYPE)	Type of a tablespace.	unsigned char	No	All	--	SQLM_ELM_TABLESPACE_TYPE
Tablespace Usable Pages (TABLESPACE_USABLE_PAGES)	Total number of pages in a tablespace minus overhead pages.	ulong	No	All	--	SQLM_ELM_TABLESPACE_USABLE_PAGES

Tablespace Information on DB (PD_DTID)						
View Name (Manager Name)	Description	Format	Delta	Supported Versions	Restriction	Data Source
Tablespace Used Pages (TABLESPACE_USED_PAGES)	Total number of pages that are currently used (not free) in a tablespace.	ulong	No	All	--	SQLM_ELM_TABLESPACE_USED_PAGES
Tablespace Used Pages Rate (TABLESPACE_USED_PAGES_RATE)	Ratio of the used pages in a tablespace.	float	No	All	--	TABLESPACE_USED_PAGES / TABLESPACE_USABLE_PAGES * 100

Acronyms and Abbreviations

API	Application Program Interface
ASCII	American Standard Code for Information Interchange
CPU	Central Processing Unit
DBMS	DataBase Management System
DDL	Data Definition Language
DML	Data Manipulation Language
EFCM	Enterprise Fabric Connectivity Manager
GCS	Global Cache Service
HA	High Availability
HTM	HiCommand Tuning Manager
I/O	Input/Output
ID	identifier, identification
IP	Internet Protocol
IPF	Itanium [®] Processor Family
MIB	Management Information Base
MTS	multi-thread server
NAS	Network Attached Storage
NIC	Network Interface Card
OCI	Oracle call interface
OS	Operating System
RAID	redundant array of inexpensive disks
RMAN	Recovery Manager
RPC	Remote Procedure Call
SAN	Storage Area Network
SGA	system global area
SNMP	Simple Network Management Protocol
SQL	Structured Query Language
TCP	transmission control protocol
WWN	World Wide Name
WWW	World Wide Web

