**System Study Document**

For

Database Name

Prepared By



For

< Client Name >

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| --- | --- | --- | --- | --- | --- |
| Ver. | Date | Author | Reviewed By | Approved By | Change Summary |
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**1. Introduction**

This document provides detailed information about the oracle database server helping the application/systems/database management team(s) to have readymade reference point for database specific information.

The contents of this System Study Document have been divided into the following sections:

• Objective and Scope

• System Infrastructure

• Oracle Server

• Findings

• Recommendations

**2.Objective and Scope**

As stated in the introduction above, this document provides detailed information of the Oracle database server. The scope of the document is to have a readymade reference for following identities within the organisation:

• Systems Management (OS)

• Database Management

• Application Management

**3.Contact Information**

The contact information required for the support activities are as follows,

|  |  |
| --- | --- |
| Particulars | Details |
| Prepared By |  |
| Customer Name |  |
| Customer’s Address |  |
| Telephone No. |  |
| Email Address |  |
| Technical Contact |  |
| Designation |  |

**4 . SYSTEM INFRASTRUCTURE**

**4.1 Introduction**

Following aspects of the system infrastructure will be covered:

* Server H/W configuration
* Operating System & Network details
* Client details

**4.2 Hardware**

Following are the server hardware details,

|  |  |
| --- | --- |
| Particular | Details |
| Server Type / Model |  |
| Computer Name |  |
| CPU Speed (MHz) |  |
| No. Of CPUs |  |
| Memory (GB) |  |
| RAID Level |  |
| Tape Devices |  |

**4.3 Operating System & Network**

Following are the server operating system and network details,

|  |  |
| --- | --- |
| Particular | Details |
| Operating System |  |
| Version |  |
| Protocol |  |
| IP Address |  |
| Particular | Details |
| Operating System |  |
| Version |  |

**4.4 Client**

Following are the details of the clients accessing application

|  |  |
| --- | --- |
| Particular | Details |
| Operating System |  |
| Version |  |

**5. ORACLE SERVER**

**5.1 INTRODUCTION**

Following aspects of the database structure will be covered:

* License Details
* Initialisation Parameters
* Version Information
* Structure Summary
* Tablespaces & Data files
* Control files
* Redo-log files
* Rollback Segments
* Rollback Segments
* User Information

**5.2 VERSION INFORMATION**

|  |  |  |  |
| --- | --- | --- | --- |
| RDBMS | CORE | TNS | NLSRTL |
|  |  |  |  |

**5.3 STRUCTURE SUMMARY**

|  |  |  |  |
| --- | --- | --- | --- |
| Server Name | File System | Home | Mode |
|  |  |  |  |

**5.4 DATABASE & INSTANCE INFORMATION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Server Name | Database  Name | Instance  Name | Created | Log  Mode | Open  Mode |
|  |  |  |  |  |  |

**5.5 Tablespace Details**

| Tablespace Name | Extent  Mgt. | Segment  Space Mgt. | Initial  Extent | Contents | Status |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

**5.6 DATAFILES**

| Tablespace Name | Datafile Name | Size  In MB |
| --- | --- | --- |
|  |  |  |

**5.7 Temp files**

| Tablespace Name | Temp file Name | Size  In MB |
| --- | --- | --- |
|  |  |  |

**5.8 CONTROL FILES**

| File Name |
| --- |
|  |

**5.9 Redo Log Files**

| Group  No. | Logfile Name (Member) | Size  In MB |
| --- | --- | --- |
|  |  |  |

**5.10 Rollback Segments**

| Segment  Name | Tablespace  Name | Initial  Extent | Next  Extent | Min  Extents | Max  Extents | Optimal  Size | Status |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |

**5.11 Users**

| User  Name | Created | Default  Tablespace | Temp.  Tablespace | Profile |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

| User Name | Role |
| --- | --- |
|  |  |

**5.12 Initialisation Parameters**

| Parameter | Value |
| --- | --- |
|  |  |

**6. FINDINGS and RECOMMENDATIONS**

Below lists down are the findings based on the study done and recommendations based on the findings.

**6.1 PHYSICAL & LOGICAL STRUCTURE**

Following are the details of the physical structure of the database in-terms of the allocated / free size, tablespace space statistics, objects that are likely to grow, fragmented objects

6.1.1 Database Size Statistics

| Allocated  Size In MB | Actual  Size In MB | Free  Size In MB |
| --- | --- | --- |
|  |  |  |

6.1.2 Tablespace Space Statistics

| Tablespace  Name | Allocated  Size In MB | Used  Size In MB | Free  Size In MB | %  Used | %  Free |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

6.1.3 Objects Needing More Space

| Owner | Segment  Name | Segment  Type | Table-space  Name | Initial  Extent | Next  Extent | Min  Extents | Max  Extents |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |

6.1.4 Fragmented Objects

| Owner | Segment  Name | Segment Type | Tablespace | Extents | Next Extent  MB |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

**6.2 MEMORY STRUCTURE**

Following are the details of the memory structure of the database in-terms of the allocated / free size, tablespace space statistics, objects that are likely to grow, fragmented objects.

6.2.1 Library Cache

SGA Details

| Fixed  Size | Variable  Size | Database  Buffer Cache | Redo  Buffer Cache |
| --- | --- | --- | --- |
|  |  |  |  |

SGA Usage

| Total  SGA | Free  SGA |
| --- | --- |
|  |  |

6.2.2 Dictionary Cache

| Gets | GetHits | GetHit  Ratio | Pins | PinHits | PinHit  Ratio | Reloads | Invalidations |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |

Statistics

Hit Ratio

| (%) Cache  Hit Ratio | (%) PIN  Hit Ratio |
| --- | --- |
|  |  |

Database Buffer Cache

Statistics

| Parameter | Gets | GetMisses | (%) Hit  Ratio |
| --- | --- | --- | --- |
|  |  |  |  |

Hit Ratio

| Gets | GetMisses | (%) Hit  Ratio |
| --- | --- | --- |
|  |  |  |

Statistics Hit Ratio

| Parameter | Gets | (%) Hit  Ratio |
| --- | --- | --- |
|  |  |  |

Log Buffer Cache

Allocation & Utilisation

| Particulars | Value |
| --- | --- |
|  |  |

Space Waits

| SID | Event | Seconds  In Wait | State |
| --- | --- | --- | --- |
|  |  |  |  |

Statistics

| Particulars | Value |
| --- | --- |
|  |  |

Hit Ratio

| %  Hit Ratio |
| --- |
|  |

**6.3 WAIT STATISTICS**

Following are the details of the wait statistics of the database in-terms of free lists, latch contention

Overall Statistic

| Class | Count | Time |
| --- | --- | --- |
|  |  |  |

Cache Buffer Lru Chains

| Latch Name | (%) Hit  Ratio |
| --- | --- |
|  |  |

Segment Header Waits

| Class | Count | Wait Time |
| --- | --- | --- |
|  |  |  |

Buffer Busy Waits

| Parameter | No. of Waits |
| --- | --- |
|  |  |

Segments Experiencing Buffer Busy Waits

| Segment Name | Segment Type | Freelists | Wait Time | Seconds In Wait | State |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

Sort Statistics

| Disk Sorts | Memory Sorts | (%) Hit  Ratio |
| --- | --- | --- |
|  |  |  |

Index Lookup Ratio

| (%) Hit  Ratio |
| --- |
|  |

Latch Statistics

| Name | Gets | Misses | Sleeps | Immediate  Gets | Immediate  Misses |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

**6.4 REDO, ARCHIVE & CHECKPOINT**

Following are the details of the contention in the database in-terms of redo log switching, archive generation & checkpoints.

Log Switching

| Event | Total  Wait | Time  Waited | Average  Wait |
| --- | --- | --- | --- |
|  |  |  |  |

Checkpoints

| Event | Total  Wait | Time  Waited | Average  Wait |
| --- | --- | --- | --- |
|  |  |  |  |

Archive Generation

| Event | Total  Wait | Time  Waited | Average  Wait |
| --- | --- | --- | --- |
|  |  |  |  |

**6.5 ROLLBACK SEGMENTS**

Following are the details of the contention in the rollback segments configured in the database.

Statistics

| Name | Writes | Gets | Waits | HWM  Size | Shrinks | Wraps | Status |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

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