ADDM Report for Task 'TASK_964'

Analysis Period

AWR snapshot range from 99 to 105.
Time period starts at 03-APR-13 07.08.18 PM
Time period ends at 04-APR-13 07.20.18 PM

Analysis Target

Database 'REDANT' with DB ID 629811920.
Database version 11.2.0.1.0.
ADDM performed an analysis of instance orcl, numbered 1 and hosted at prashant.

Activity During the Analysis Period

Total database time was 452 seconds.
The average number of active sessions was .01.

Summary of Findings

	Description	Active Sessions Percent of Activity	Recommendations
1	I/O Throughput	.01 | 100	3
2	Undersized instance memory	0 | 7.75	1
3	Hard Parse Due to Invalidations	0 | 5.3	1
4	"Other" Wait Class	0 | 4.95	0
5	Commits and Rollbacks	0 | 4.14	1
6	PL/SQL Compilation	0 | 4.05	1
7	Checkpoints Due to MTTR	0 | 3.44	1
8	Checkpoints Due to DROP or TRUNCATE	0 | 3	0
9	Hard Parse Due to Sharing Criteria	0 | 2.14	1

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Findings and Recommendations

Finding 1: I/O Throughput
Impact is .01 active sessions, 100% of total activity.

The throughput of the I/O subsystem was significantly lower than expected.

Recommendation 1: Host Configuration
Estimated benefit is .01 active sessions, 100% of total activity.

Action
Consider increasing the throughput of the I/O subsystem. Oracle's recommended solution is to stripe all data files using the SAME methodology. You might also need to increase the number of disks for better performance.
Rationale
During the analysis period, the average data files' I/O throughput was 14 K per second for reads and 3.2 K per second for writes. The average response time for single block reads was 14 milliseconds.

Recommendation 2: Host Configuration
Estimated benefit is .01 active sessions, 100% of total activity.

Action
Consider slowing down RMAN or Data Pump activity, or scheduling these jobs when user activity is lower.

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   Rationale
      The I/O throughput on data and temp files was divided as follows: 0% by
      RMAN, 29% by Data Pump, 0% by Recovery and 70% by all other activity.

   Recommendation 3: Host Configuration
   Estimated benefit is .01 active sessions, 100% of total activity.
   ------------------------------------------------------------------
   Action
      The performance of some data and temp files was significantly worse than
      others. If striping all files using the SAME methodology is not
      possible, consider striping these file over multiple disks.
   Rationale
      For file /u01/app/oracle/oradata/orcl/sysaux01.dbf, the average response
      time for single block reads was 132 milliseconds, and the total excess
      I/O wait was 479 seconds.
      Related Object
         Database file
         "/u01/app/oracle/oradata/orcl/sysaux01.dbf"

   Symptoms That Led to the Finding:
   ---------------------------------
      Wait class "User I/O" was consuming significant database time.
      Impact is 0 active sessions, 19.25% of total activity.


Finding 2: Undersized instance memory
Impact is 0 active sessions, 7.75% of total activity.
-----------------------------------------------------
The Oracle instance memory (SGA and PGA) was inadequately sized, causing
additional I/O and CPU usage.
The value of parameter "memory_target" was "500 M" during the analysis period.

   Recommendation 1: Database Configuration
   Estimated benefit is 0 active sessions, 7.75% of total activity.
   ------------------------------------------------------------------
   Action
      Increase memory allocated to the instance by setting the parameter
      "memory_target" to 875 M.

   Symptoms That Led to the Finding:
   ---------------------------------
      Hard parsing of SQL statements was consuming significant database time.
      Impact is 0 active sessions, 20.38% of total activity.
         Contention for latches related to the shared pool was consuming
         significant database time.
         Impact is 0 active sessions, 2.69% of total activity.
            Wait class "Concurrency" was consuming significant database time.
            Impact is 0 active sessions, 2.94% of total activity.
      Wait class "User I/O" was consuming significant database time.
      Impact is 0 active sessions, 19.25% of total activity.


Finding 3: Hard Parse Due to Invalidations
Impact is 0 active sessions, 5.3% of total activity.
---------------------------------------------------
Cursors were getting invalidated due to DDL operations. This resulted in
additional hard parses which were consuming significant database time.

   Recommendation 1: Application Analysis
   Estimated benefit is 0 active sessions, 5.3% of total activity.
   ---------------------------------------------------------------
   Action
      Investigate appropriateness of DDL operations.

   Symptoms That Led to the Finding:
   ---------------------------------
      Hard parsing of SQL statements was consuming significant database time.
      Impact is 0 active sessions, 20.38% of total activity.
```

Contention for latches related to the shared pool was consuming
significant database time.
Impact is 0 active sessions, 2.69% of total activity.
Wait class "Concurrency" was consuming significant database time.
Impact is 0 active sessions, 2.94% of total activity.

Finding 4: "Other" Wait Class
Impact is 0 active sessions, 4.95% of total activity.

Wait class "Other" was consuming significant database time.
Database latches in the "Other" wait class were not consuming significant
database time.

No recommendations are available.

Finding 5: Commits and Rollbacks
Impact is 0 active sessions, 4.14% of total activity.

Waits on event "log file sync" while performing COMMIT and ROLLBACK operations
were consuming significant database time.

Recommendation 1: Host Configuration
Estimated benefit is 0 active sessions, 4.14% of total activity.

Action
Investigate the possibility of improving the performance of I/O to the
online redo log files.
Rationale
The average size of writes to the online redo log files was 6 K and the
average time per write was 3 milliseconds.
Rationale
The total I/O throughput on redo log files was 1.3 K per second for
reads and 1.5 K per second for writes.
Rationale
The redo log I/O throughput was divided as follows: 0% by RMAN and
recovery, 52% by Log Writer, 0% by Archiver, 0% by Streams AQ and 47% by
all other activity.

Symptoms That Led to the Finding:

Wait class "Commit" was consuming significant database time.
Impact is 0 active sessions, 4.14% of total activity.

Finding 6: PL/SQL Compilation
Impact is 0 active sessions, 4.05% of total activity.

PL/SQL compilation consumed significant database time.

Recommendation 1: Application Analysis
Estimated benefit is 0 active sessions, 4.05% of total activity.

Action
Investigate the appropriateness of PL/SQL compilation. PL/SQL
compilation can be caused by DDL on dependent objects.

Finding 7: Checkpoints Due to MTTR
Impact is 0 active sessions, 3.44% of total activity.

Buffer cache writes due to setting of the obsolete parameters
"fast_start_io_target", "log_checkpoint_interval" and "log_checkpoint_timeout"
were consuming significant database time.

Recommendation 1: Database Configuration
Estimated benefit is 0 active sessions, 3.44% of total activity.

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   ---------------------------------------------------------------
   Action
      Oracle's recommended solution is to control MTTR setting using the
      "fast_start_mttr_target" parameter instead of the
      "fast_start_io_target", "log_checkpoint_interval" and
      "log_checkpoint_timeout" parameters.

   Symptoms That Led to the Finding:
   ---------------------------------
      The throughput of the I/O subsystem was significantly lower than
      expected.
      Impact is .01 active sessions, 100% of total activity.
         Wait class "User I/O" was consuming significant database time.
         Impact is 0 active sessions, 19.25% of total activity.


Finding 8: Checkpoints Due to DROP or TRUNCATE
Impact is 0 active sessions, 3% of total activity.
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Buffer cache writes due to DROP and TRUNCATE operations had a significant
impact on the throughput of the I/O subsystem.

   No recommendations are available.

   Symptoms That Led to the Finding:
   ---------------------------------
      The throughput of the I/O subsystem was significantly lower than
      expected.
      Impact is .01 active sessions, 100% of total activity.
         Wait class "User I/O" was consuming significant database time.
         Impact is 0 active sessions, 19.25% of total activity.
      Wait class "Application" was consuming significant database time.
      Impact is 0 active sessions, 3.8% of total activity.


Finding 9: Hard Parse Due to Sharing Criteria
Impact is 0 active sessions, 2.14% of total activity.
-----------------------------------------------------
SQL statements with the same text were not shared because of cursor
environment mismatch. This resulted in additional hard parses which were
consuming significant database time.
Common causes of environment mismatch are session NLS settings, SQL trace
settings and optimizer parameters.

   Recommendation 1: Application Analysis
   Estimated benefit is 0 active sessions, 2.14% of total activity.
   ----------------------------------------------------------------
   Action
      Look for top reason for cursor environment mismatch in
      V$SQL_SHARED_CURSOR.

   Symptoms That Led to the Finding:
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      Hard parsing of SQL statements was consuming significant database time.
      Impact is 0 active sessions, 20.38% of total activity.
         Contention for latches related to the shared pool was consuming
         significant database time.
         Impact is 0 active sessions, 2.69% of total activity.
            Wait class "Concurrency" was consuming significant database time.
            Impact is 0 active sessions, 2.94% of total activity.



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          Additional Information
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Miscellaneous Information
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Wait class "Configuration" was not consuming significant database time.
CPU was not a bottleneck for the instance.
Wait class "Network" was not consuming significant database time.
Session connect and disconnect calls were not consuming significant database
time.

The database's maintenance windows were active during 23% of the analysis
period.


End of Report
Report written to addmrpt_1_99_105.txt
SQL> !
[oracle@prashant ~]$ ls
addmrpt_1_99_105.txt  Desktop  on.lst
[oracle@prashant ~]$ vi addmrpt_1_99_105.txt
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