

# Oracle GoldenGate

## Cache Memory Usage

```
./ggsci
dblogin USERIDALIAS ggadmin
SEND EXTRACT ext_mr CACHEMGR CACHESTATS
SEND REPLICAT rep_file CACHEMGR CACHESTATS
```

## Statistics

```
./ggsci
STATS REPLICAT rep_mr, TOTALONLY *.* , REPORTRATE MIN
STATS EXTRACT ext_mr, TOTALONLY *.* , REPORTRATE MIN
```

## Process Info

```
INFO REPLICAT *, ALLPROCESSES
INFO REPLICAT *, TASKS
INFO EXTRACT *, TASKS
```

## Network Stats

```
send extract dp_mr gettcpstats
send extract dp_mr resettcpstats
```

## Stats from within DB

```
/* Extract side */
SELECT capture_name, 86400 *(available_message_create_time -
capture_message_create_time) latency_in_seconds FROM GV$GOLDENGATE_CAPTURE;

/* Replicat side */
SELECT r.apply_name, 86400 *(r.dequeue_time - c.lwm_message_create_time)
latency_in_seconds FROM GV$GG_APPLY_READER r, GV$GG_APPLY_COORDINATOR c
WHERE r.apply# = c.apply# AND r.apply_name = c.apply_name;
```

## Heartbeat Table

Show heartbeat for all extracts and replicats

```
SELECT * FROM ggadmin.gg_heartbeat;
```

Show lag history

```
SET pagesize 200 linesize 200
col heartbeat_received_ts format a30
col incoming_path format a24
col incoming_lag format 999,999.999
ALTER SESSION SET NLS_DATE_FORMAT='YYYY-MM-DD HH24:MI:SS';
SELECT heartbeat_received_ts, incoming_path, incoming_lag FROM
ggadmin.gg_lag_history;
```

## Tuning STREAMS pool

Set the STREAMS\_POOL\_SIZE initialization parameter for the database to the following value:  
**(MAX\_SGA\_SIZE \* # of integrated Extracts) + 25% head room**

```
SELECT current_size FROM v$sga_dynamic_components WHERE component = 'streams
pool';

/* Streams pool advice */
COLUMN STREAMS_POOL_SIZE_FOR_ESTIMATE HEADING 'Streams Pool|Size for
Estimate'
FORMAT 999999999999
COLUMN STREAMS_POOL_SIZE_FACTOR HEADING 'Streams Pool|Size|Factor' FORMAT
99.9
COLUMN ESTD_SPILL_COUNT HEADING 'Estimated|Spill|Count' FORMAT 99999999
COLUMN ESTD_SPILL_TIME HEADING 'Estimated|Spill|Time' FORMAT 99999999.99
COLUMN ESTD_UNSPILL_COUNT HEADING 'Estimated|Unspill|Count' FORMAT 99999999
COLUMN ESTD_UNSPILL_TIME HEADING 'Estimated|Unspill|Time' FORMAT 99999999.99

SELECT STREAMS_POOL_SIZE_FOR_ESTIMATE,
STREAMS_POOL_SIZE_FACTOR,
ESTD_SPILL_COUNT,
ESTD_SPILL_TIME,
ESTD_UNSPILL_COUNT,
ESTD_UNSPILL_TIME
FROM V$STREAMS_POOL_ADVICE;
```

## Monitor Dependency Waits

If there are many wait dependencies when using integrated Replicat, try reducing the value of BATCHTRANSOPS.

```
SELECT APPLY_NAME, STATE, ACTIVE_SERVER_COUNT, TOTAL_WAIT_DEPS,
TOTAL_WAIT_COMMITS FROM V$GG_APPLY_COORDINATOR;
```

## Process Memory Usage

[gg\\_memory\\_usage.sh](#)

```
#!/bin/bash

#####
# determine the OS type
#####
OSNAME=`uname`

case "$OSNAME" in
  "SunOS")
    echo "OSNAME = $OSNAME"
    ;;
  "Linux")
    echo "OSNAME = $OSNAME"
    ;;
  "*")
    echo "This script has not been verified on $OSNAME"
    exit 1
    ;;
esac

#####
# set the temp file
#####
TMPFILE=/tmp/pmem.tmp
if [ -f $TMPFILE ]
then
  rm -f $TMPFILE
fi

#####
# loop over the gg process types
#####
PROCESSES="extract replicat"

for PROCESS in $PROCESSES
do
  FLAG=""
  FLAG=`ps -ef | grep $PROCESS | grep -v grep`
  if [ -z "$FLAG" ]
  then
    echo "No $PROCESS processes found"
  else
    echo
    echo "#####"
    echo "# Individual $PROCESS Process Usage #"
    echo "#####"
```

```

    case "$OSNAME" in
        "Linux")
            ps -C $PROCESS -0 rss > $TMPFILE
            cat $TMPFILE | grep $PROCESS | awk '{print $2/1024, "MB", $12}'
| sort -k 2
            ;;
        "SunOS")
            ps -efo vsz,uid,pid,ppid,pcpu,args | grep -v grep | grep
$PROCESS > $TMPFILE
            cat $TMPFILE | grep $PROCESS | awk '{print $1/1024, "MB", $8}'
| sort -k 2
            ;;
        "*" )
            echo "This script has not been verified on $OSNAME"
            exit 1
            ;;
    esac
    rm -f $TMPFILE

    echo
    echo "#####"
    echo "#   Total $PROCESS Process Usage   #"
    echo "#####"
    case "$OSNAME" in
        "Linux")
            ps -C $PROCESS -0 rss > $TMPFILE
            cat $TMPFILE | grep $PROCESS | awk '{count ++; sum=sum+$2; }
END \
            { print "Number of processes      =",count; \
              print "AVG Memory usage/process =",sum/1024/count, "MB"; \
              print "Total memory usage          =", sum/1024,  " MB"}'
            ;;
        "SunOS")
            ps -efo vsz,uid,pid,ppid,pcpu,comm | grep -v grep | grep
$PROCESS > $TMPFILE
            cat $TMPFILE | awk '{count ++; sum=sum+$1; } END \
            { print "Number of processes      =",count; \
              print "AVG Memory usage/process =",sum/1024/count, "MB"; \
              print "Total memory usage          =", sum/1024,  " MB"}'
            ;;
        "*" )
            echo "This script has not been verified on $OSNAME"
            exit 1
            ;;
    esac
    rm -f $TMPFILE
fi
done

exit 0

```

## Output

```
OSNAME = Linux

#####
# Individual extract Process Usage #
#####
41.7109 MB DP_C
31.9805 MB DP_F
29.9297 MB DP_M
37.3672 MB DP_M_0
37.8438 MB DP_S
29.1562 MB DP_SV
1516.69 MB EXT_C
74.8516 MB EXT_F
556.352 MB EXT_M
246.926 MB EXT_M_0
68.7773 MB EXT_S
91.5234 MB EXT_SV

#####
# Total extract Process Usage #
#####
Number of processes          = 12
AVG Memory usage/process    = 230.259 MB
Total memory usage          = 2763.11 MB
No replicat processes found
```

## Apply Server Details

```
SELECT APPLY_NAME, APPLY#, SERVER_ID, STATE, TOTAL_MESSAGES_APPLIED FROM
V$GG_APPLY_SERVER ORDER BY APPLY_NAME, SERVER_ID;
```

## Apply Coordinator Detail

```
SELECT APPLY_NAME, STATE, TOTAL_APPLIED, TOTAL_ASSIGNED, TOTAL_ROLLBACKS,
TOTAL_ERRORS, ACTIVE_SERVER_COUNT, TOTAL_WAIT_DEPS, TOTAL_WAIT_COMMITS FROM
V$GG_APPLY_COORDINATOR;
```

## Queue Status

```
SELECT DST_QUEUE_SCHEMA, DST_QUEUE_NAME, TOTAL_MSGS, SPID, STATE FROM
V$PROPAGATION_RECEIVER;
```

## Apply Latency

```
SELECT r.apply_name, 86400 *(r.dequeue_time -c.lwm_message_create_time)
latency_in_seconds FROM GV$GG_APPLY_READER r, GV$GG_APPLY_COORDINATOR c
WHERE r.apply# = c.apply# AND r.apply_name = c.apply_name;
```

## Trace Monitoring

under OGG installation home directory, create an xml file named gglog-<EXT\_OR\_REP\_NAME>.xml  
gglog-<EXT\_OR\_REP\_NAME>.xml contents:

```
<?xml version="1.0"?>
<configuration reset="true">
<appender name="myTraceFile" class="FileAppender">
<param name="File" value="myTrace-%I.log"/>
<param name="Append" value="true"/>
<layout class="PatternLayout"/>
</appender>
<logger name="ggstd.ptrace">
<level value="all"/>
</logger>
</configuration>
```

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Last update: **2021/04/23 07:57**

