ORATOP

Do lessget more ...

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About Me...

- ➢ Oracle and Apps DBA since 2000
- ➢ Worked for oracle for the past 7 Years
- Founder Of TopExperts since 2013
- Consult to top customer in Israel
- ➢ Board member of iloug



About TopExperts . . .

- Experts services for
 - Oracle Technology
 - MS-Sql , MySql etc ...
 - kdb+ , BigData Solutions



- Business partners of
 - Oracle
 - KX Systems



Agenda

- How to work less and get more
- Let's start with a question ?



What is Oratop ?

- A Text Base utility to monitor Oracle DB
- compatibility
 - 11.2 onwards
 - Unix/Linux OS (no Windows)

What Oratop can do?

- Real-Time Database Monitoring
- Real-Time Database performance
- Identifying contention and bottlenecks
- Not replacement of (ash, addm, awr etc..)



Oratop scope

- Single Instance
- RAC/ASM Aware
- PDB/CDB Aware (12c...)
- Standby Aware , Active Data Guard



How to Install ?

- Download from MOS : **1500864.1**
- And Start use it
- Error while loading shared libraries:libclntsh.so.12.1
 - export ORACLE_HOME=<database home>
 - export LD_LIBRARY_PATH=\$ORACLE_HOME/lib
 - export PATH=\$ORACLE_HOME/bin:\$PATH



Lets Start . . .

- ./oratop system@sid
- ./oratop -f -d -i 10 / as sysdba

Command line arguments



Command line vs Runtime

d : Real-Time Top 5 Wait Events, section 3.Specifies Wait Events display mode.Default: CumulativeTo override the default value

- Command line: -d
- Runtime: d

k : "FILE#:BLOCK#" for objects being waited on, process section 4.
 Specifies "FILE#:BLOCK#" display mode.
 Default: EVENT/LATCH
 To override the default value

- Command line: -k
- Runtime: k

m : "MODULE/ACTION", process section 4. Specifies "MODULE/ACTION" display mode. Default: USERNAME/PROGRAM To override the default value

- Command line: -m
- Runtime: m



Command line vs Runtime

s : SQL mode of section 4. Specifies SQL display. Default: Process mode To override the default value

- Command line: -s
- Runtime: s

c : Database Service centric mode.
 Displays information based on the database service specified in the connect string.
 Default: Connection mode
 To override the default value

- Command line: -c
- Runtime: N/A

f: Long format, (132 columns)
Specifies long format for header & process section.
Default: short (80 columns)
To override the default value

- Command line: -f
- Runtime: f

p : Process mode of section 4.process display.Default: Process modeTo override the default value

- Command line: -p
- Runtime: p



Command line vs Runtime

t: Displays tablespace information.

Default: N/A

- Command line: N/A
- Runtime: t

a: Displays ASM diskgroup information. (no op for non-ASM) Default: N/A

- Command line: N/A
- Runtime: a

x: Displays SQL execution plan table. Requires input of the active SQL sql_id value. Default: N/A

- Command line: N/A
- Runtime: x

i : Interval delay time. (requires value in seconds)

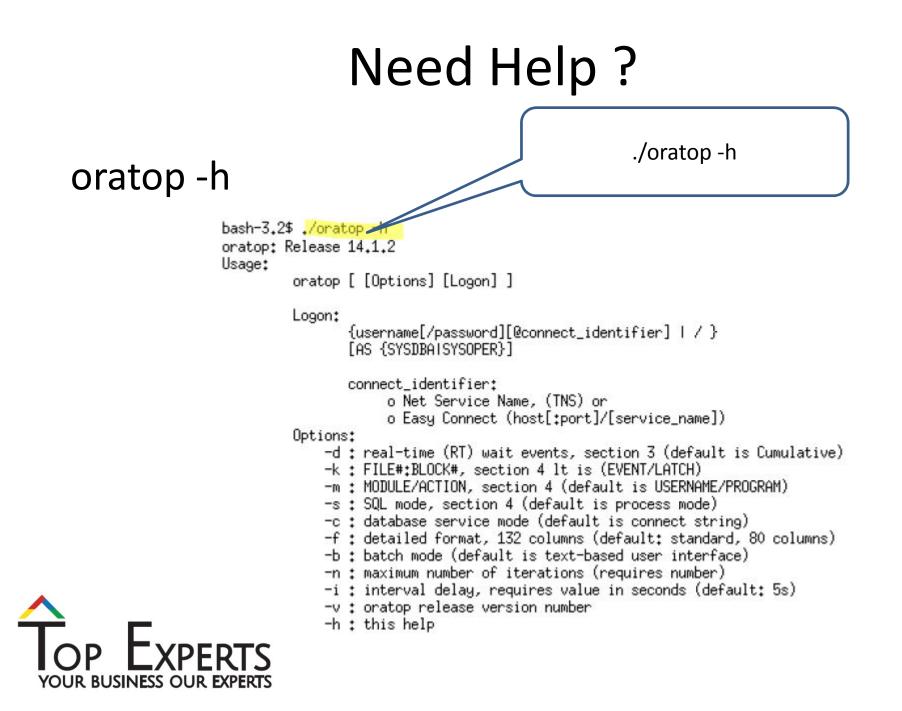
Specifies the delay between update refresh. A short interval delay (<10s) is not guaranteed for the specified delay. This is particularly true for a loaded system.

Default: 5 seconds.

To override the default value

- Command line: -i < number in seconds>
- Runtime: i





How we can connect ?

- SqlNet TNS_ADMIN
- EZ-connect -

Example,

Using Easy Connect (EZConnect)

- Non-default port oratop system/manager@dbhost:4800/db1.domain.com
- Default port (1521): oratop system/manager@dbhost/db1.domain.com



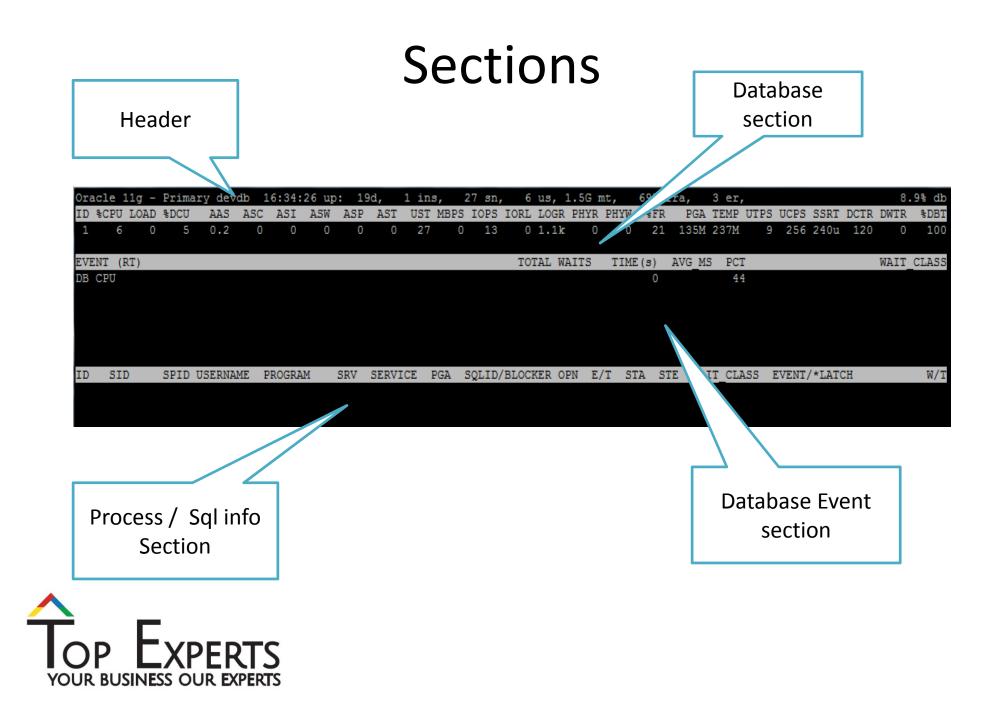
Main Screen

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1	1738 1903	8939 A		P032 P045	DED DED	SYS#USE 3.7M SYS#USE 4.8M	gwkbyx1rr4k5s Si		ACT I/O ACT I/O		db file sequential	
	1903	14108 A 8925 A		P045 P025	DED	SYS#USE 4.8M	gwkbvx1rr4k5s Sl gwkbvx1rr4k5s Sl	L 30s	ACT I/O		db file sequential db file sequential	
1	1918	8929 A		P025	DED	SYS#USE 3.5M	gwkbvx1nr4k5s St gwkbvx1nr4k5s St	L 30s	ACT I/O		db file sequential	
1	765	14106 A		P044	DED	SYS#USE 5.3M	gwkbvx1rr4k5s St	L 30s	ACT I/O		db file sequential	
- î	700	8927 A		P026	DED	SYS#USE 3.5M	gwkbvx1rr4k5s Si		ACT CPU		cpu runqueue	741u
1	2095			P034	DED	SYS#USE 3.5M	gwkbvx1rr4k5s Si		ACT CPU		cpu runqueue	643u
1	1164	9581 A		P040	DED	SYS#USE 4.3M	gwkbvx1rr4k5s St		ACT CPU		cpu runqueue	570u
1	388	8931 A		P028	DED	SYS#USE 3.5M	gwkbvx1rr4k5s St		ACT CPU		cpu runqueue	559u
1	1542	8937 A		P031	DED	SYS#USE 4.2M	gwkbvx1rr4k5s St		ACT CPU	User I/O	cpu runqueue	527u
1	1905	9587 A		P043	DED	SYS#USE 3,5M	gwkbvx1rr4k5s S		ACT CPU	User I/O	cpu runqueue	417u
1	215	8945 A	PPS	P035	DED	SYS#USE 3,5M	gwkbvx1nn4k5s S		ACT CPU	User I/O	cpu runqueue	407u
1	400	9573 A		P036	DED	SYS#USE 4.5M	gwkbvx1rr4k5s S		ACT CPU		opu runqueue	405u
1	1908	8941 A		P033	DED	SYS#USE 4.5M	gwkbvx1rr4k5s S		ACT I/O		db file sequential	
1	594	9575 A		P037	DED	SYS#USE 3.4M	gwkbvx1rr4k5s S		ACT CPU		cpu runqueue	383u
1	597	8933 A		P029	DED	SYS#USE 3.5M	gwkbvx1rr4k5s S		ACT I/O		db file sequential	
1	1345	9583 A		P041	DED	SYS#USE 4.4M	gwkbvx1rr4k5s S		ACT CPU		cpu runqueue	301u
1	1337	8935 A		P030	DED	SYS#USE 3.5M	gwkbvx1rr4k5s S		ACT I/O		db file sequential	
	1531	14112 A		P047	DED	SYS#USE 5.3M	gwkbyx1rr4k5s Si		ACT I/O		db file sequential	
	1735 1355	9585 A 14110 A		P042 P046	DED DED	SYS#USE 4.0M	gwkbvx1rr4k5s Si gwkbvx1rr4k5s Si		ACT I/O ACT I/O		db file sequential	
	776	9577 A		P046	DED	SYS#USE 3.5M	gwkbvx1rr4k5s Si gwkbvx1rr4k5s Si		ACT I/O		db file sequential db file sequential	
1	1720	8923 A		P024	DED	SYS#USE 3.5M	gwkbvx1rr4k5s St gwkbvx1rr4k5s St		ACT I/O		db file sequential	
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Sections

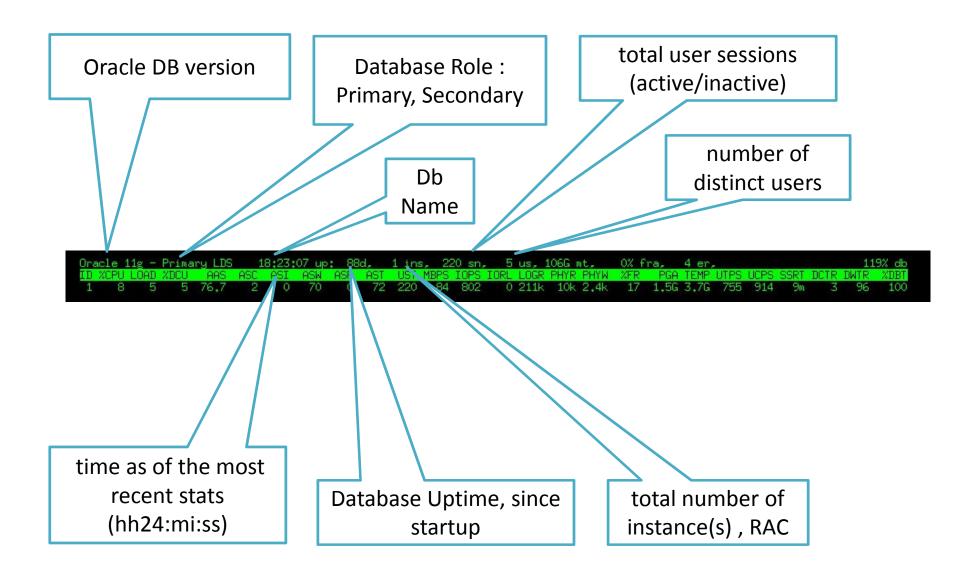
- Header Global Database information
- Databases database Instance activity
- **DB Events** AWR like top 5 events
- **Process/SQL** Processes/SQL information

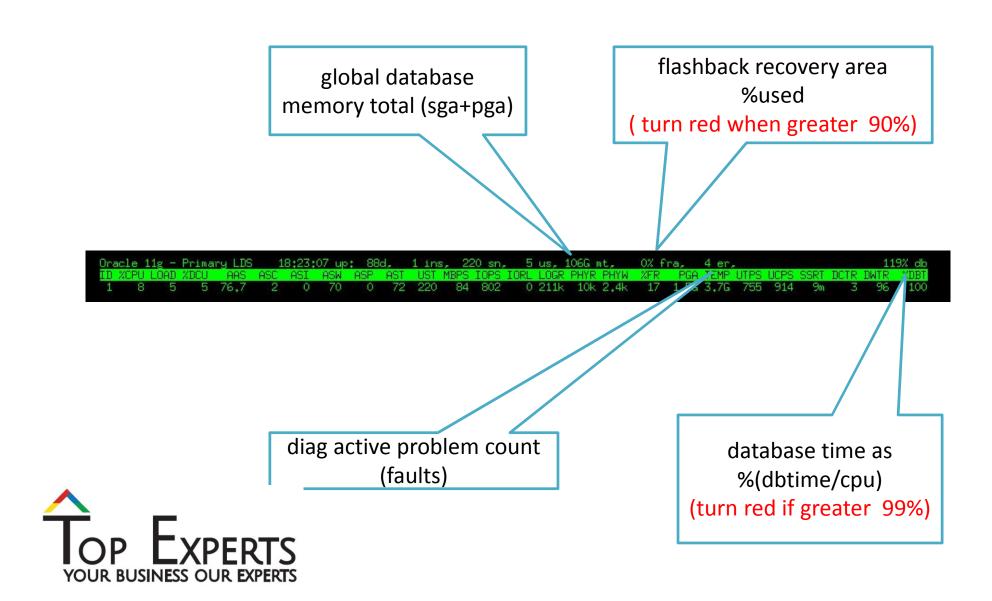




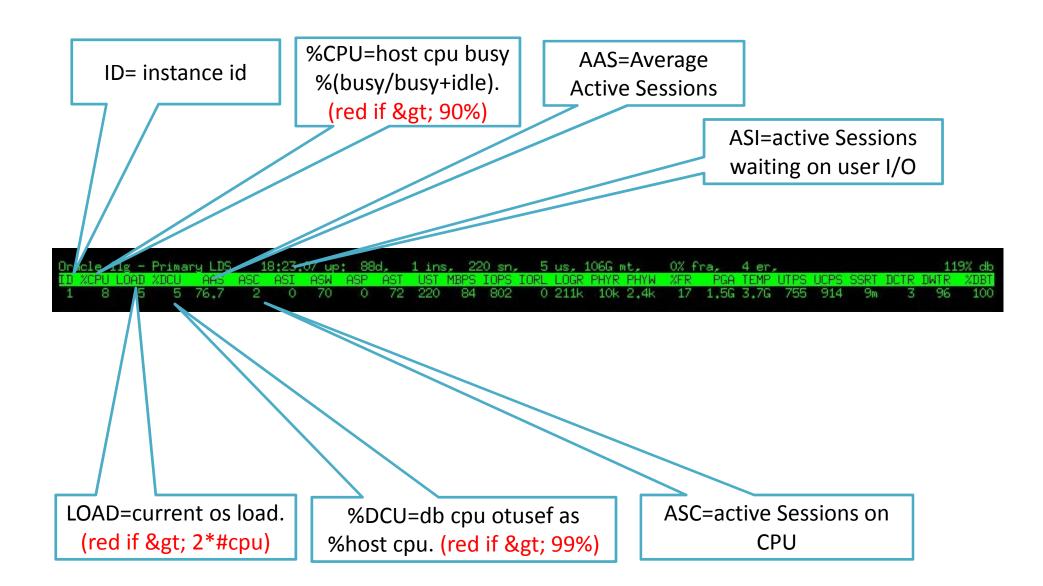
Header – Global Database information

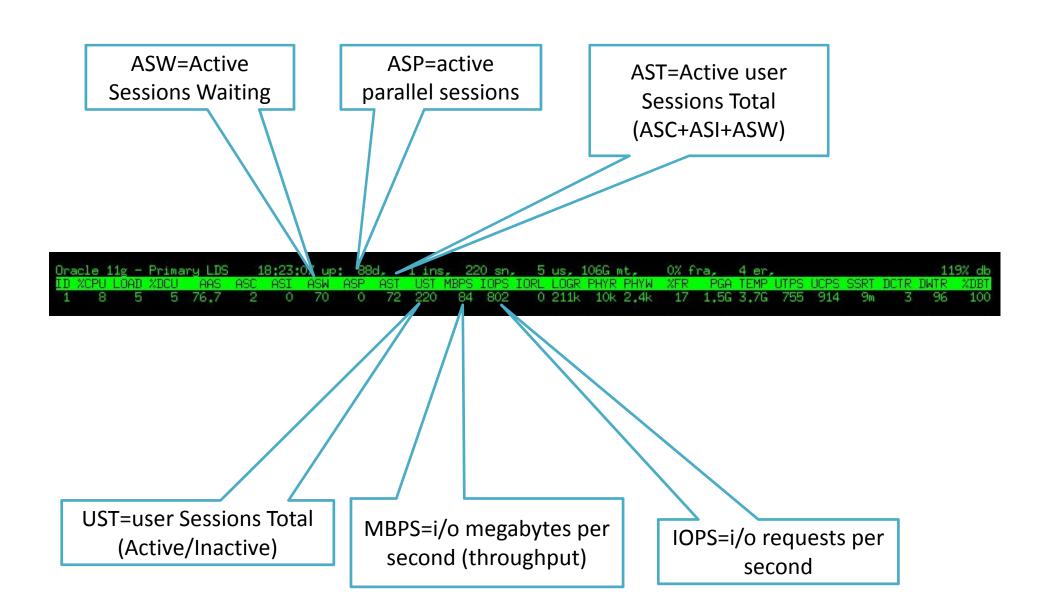


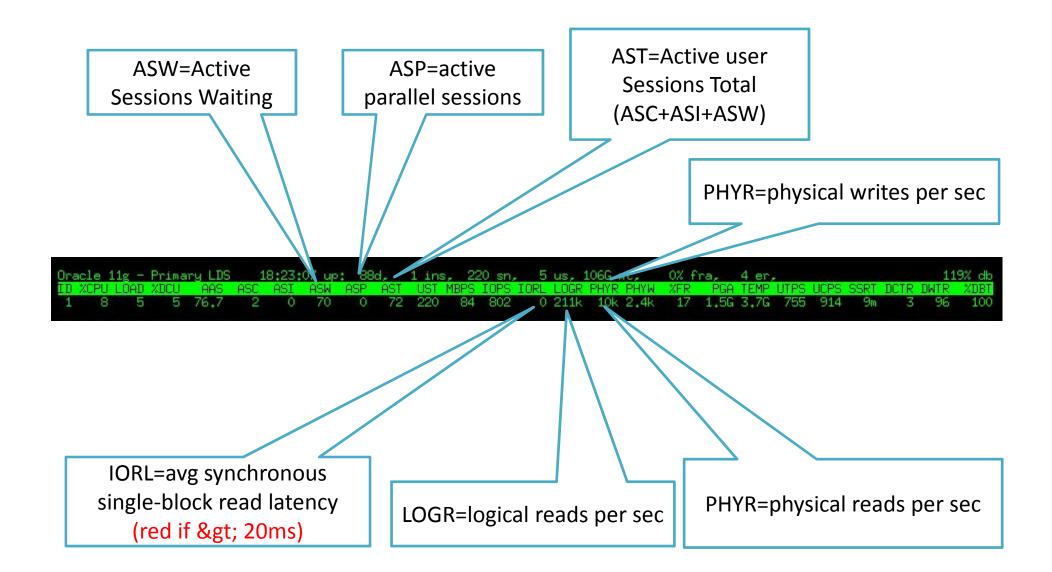


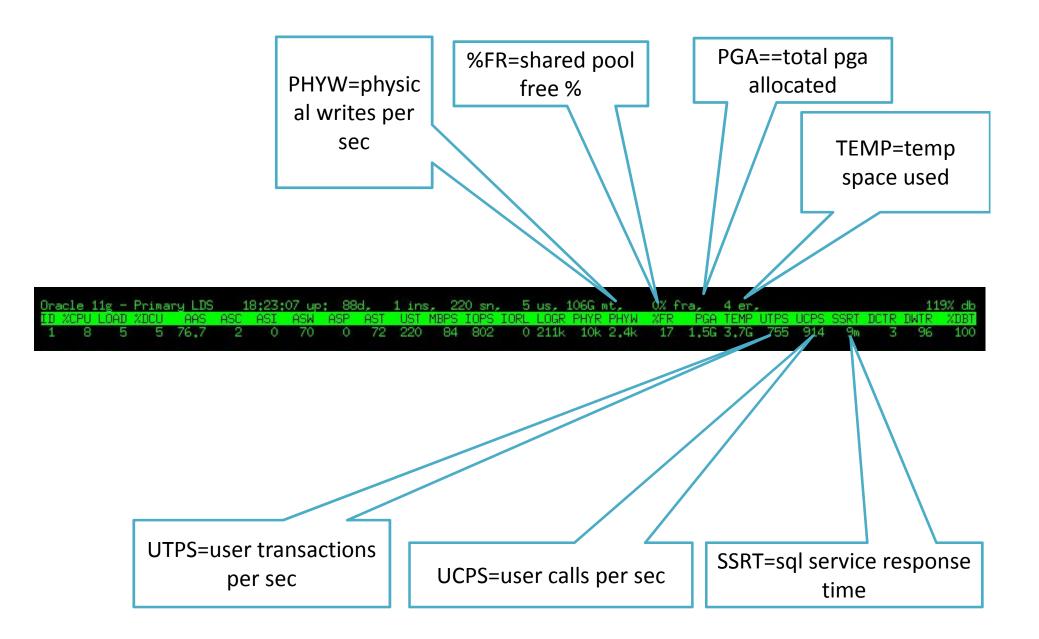


Databases – database Instance activity







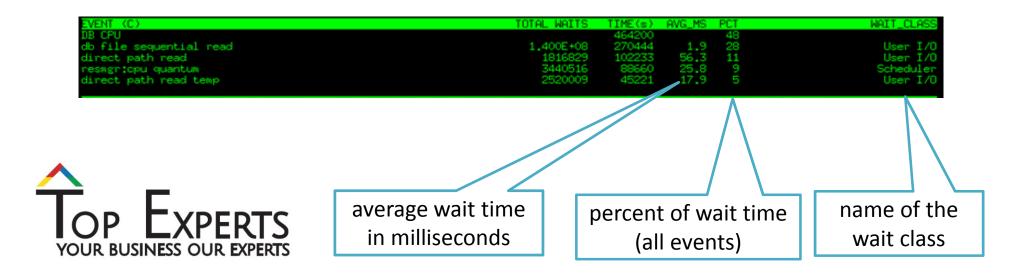


DB Events – AWR like top 5 events

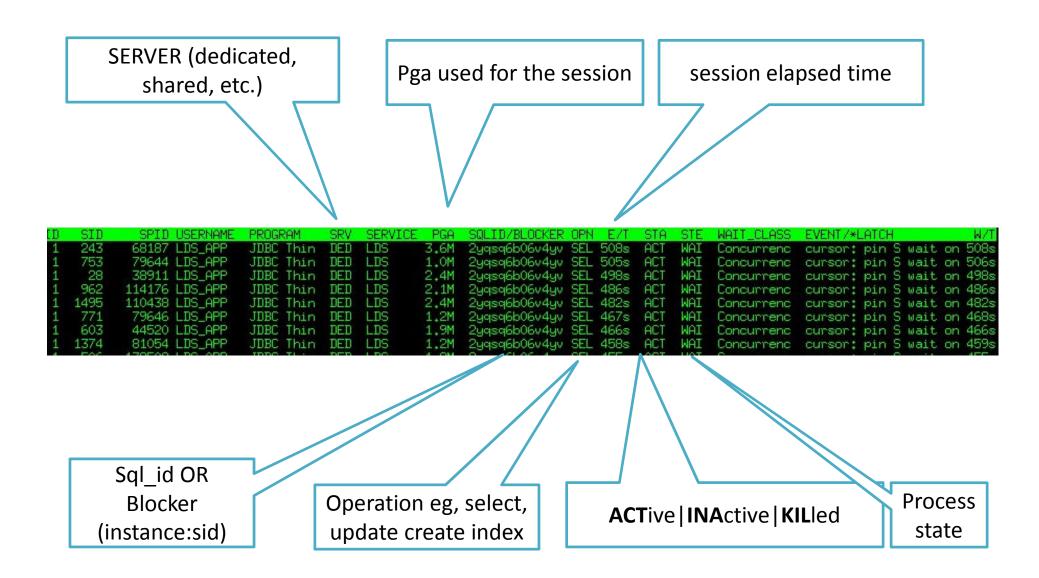
Top 5 Timed Events

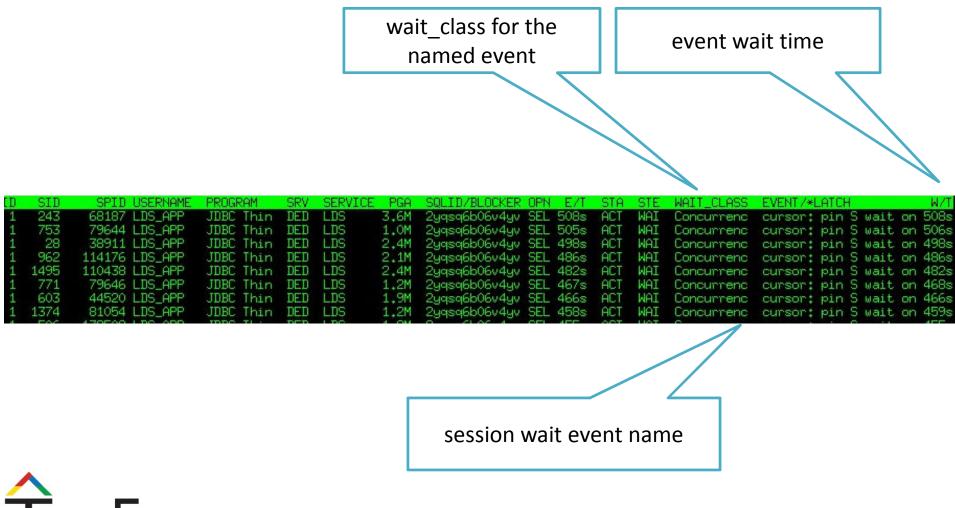
- o Cluster-wide, non-idle
- o Ordered by wait time desc





Processes/SQL information







Extended keys

Explain Plan

- Hit the "x" and enter the sql_id Will display the actual plan ۲
- •

Oracle 11g - Primary gltst 08:42:17 up: 21h, 1 ins, 77 sn, 3 ID XCPU LOAD XDCU AAS ASC ASI ASM ASP AST UST MBPS IOPS IORL 1 96 15 95 15.9 12 3 35 9 49 77 510 649 2260	LOGR PHYR PH	IYW XER	PGA TEMP UTPS	UCPS SSRT 1 5 70m		
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Enter sql_id: 4nw4msjpqyr16 PLAN_TABLE_OUTPUT 						
<pre>SELECT /** PARALLEL(T,260) PARALLEL_INDEX(T,260) DBMS_STATS CURSOR_SHARTIND_EVACT USE_HEAK_NAME_RESL_DYNANTC_SAMPLING(0) NO_MONITO NO_SUBSTRB_PAD */CDUNT(*), COLNT(*)RDJECT_TO_DATE_DR_BEQ*), COUNT(0) "PROJECT_TO_DATE_DR_BEQ*), SUM(SYS_OP_OPNSIZE("PROJECT_TO_DATE_DR_BEQ SUBSTRB(DLMP (MIN(*)PROJECT_TO_DATE_DR_BEQ*),16,0,32),1,120), COUNT(*PROJECT_TO_DATE_DR_BEQ*), COUNT(DISTINCT *PROJECT_TO_DATE_CR_E SUM(SYS_OP_OPNSIZE(*PROJECT_TO_DATE_CR_BEQ*)), SUBSTRB(DLMP (MAX(*PROJECT_TO_DATE_CR_BEQ*),16,0,32),1,120), SUBSTRB(DLMP (MAX(*PROJECT_TO_DATE_CR_BEQ*),16,0,32),1,120), SUBSTRB(DLMP (MAX(*PROJECT_TO_DATE_CR_BEQ*),16,0,32),1,120), SUBSTRB(DLMP (MAX(*PROJECT_TO_DATE_CR_BEQ*),16,0,32),1,120), SUBSTRB(DLMP (MAX(*QUARTER_TO_DATE_DR*)), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), COUNT(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MAX(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUBSTRB(DLMP (MIN(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUM(SYS_OP_OPNSIZE(*QUARTER_TO_DATE_DR*),16,0,32),1,120), SUM(SYS_OP_OPNSIZE(*QUARTER_TO_DATE_CR*)), SUBSTRB(DUMP (MIN(*QUA Plan hash value: 1797687188 </pre>	(STINCT					
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press Enter to return						

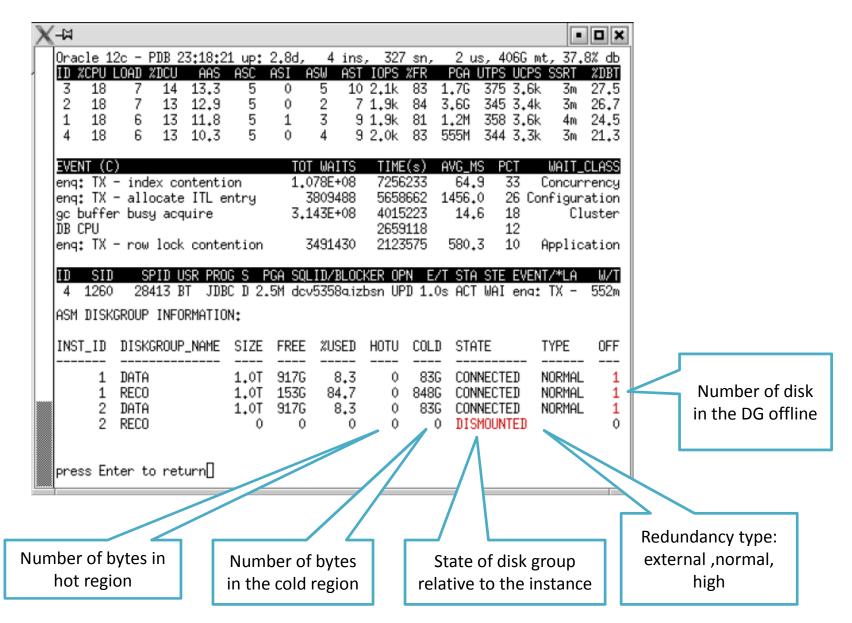
Space check

- Hit the "t" for non-ASM
- Hit the "a" for ASM and diskgroups

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Asm Diskgroup info



DataGuard

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reliable IORL		fra, 0 er, <mark>ar 533kps</mark> ,	41.7% db R DWTR %DBT
2 1708 10 1 1140	18,6k 0 0 12 11,4M 0 122 11 TAL WAITS TIME(s) 683202	2 427M 0 0 44 13m 4 L 921M 0 0 175 61m 8 AVG_MS PCT 75	46 53 5.9 37 12 94.1 WAIT_CLASS
1 1515 1 2276 1 386 1 764 1 1330	8391352 110346 29209126 56195 33020277 33158 20499067 31119	13.2 12 1.9 6 0.9 4 1.0 3	Other Cluster Other System I/O
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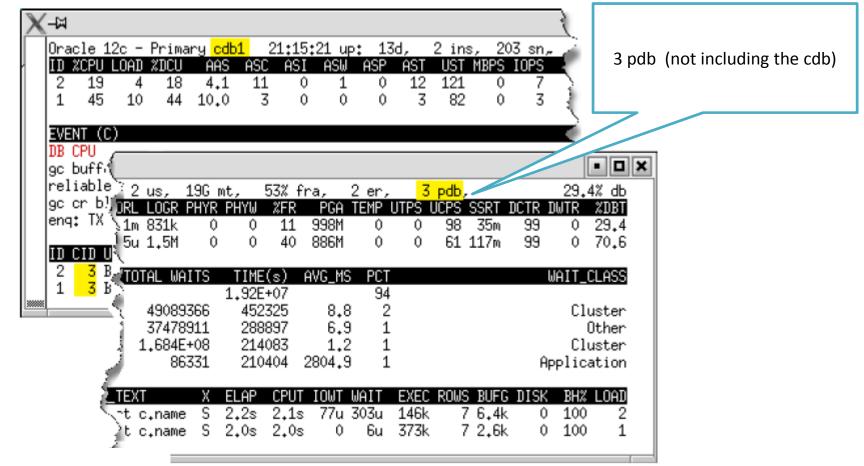


DataGuard

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Connecting to CDB





Connecting to PDB

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	(T c.name, c o.custid, prodid, p	S	ELAP 2.0s 1.1s 947m	CPUT 2.0s 1.0s 928m	0 0	JAIT Gu 9u 3u	EXEC 378k 378k 504k	7 7	BUFG 6.4k 1.8k 8.2k	DISK 0 0 0	BH2 100 100 100	LOAI 7 1 5

Demo

Useful info

- MOS note: 1500864.1
 - Installation
 - Download
 - manual



• Abbreviations:

- [N/B]: count(N)/ Byte(B) (k)illo, (M)ega, (G)iga, (T)erra, [PEZY]
- [T] : Time (u)micro, (m)illi, (s)econd, (h)our, (d)ay, (y)ear
- [m/s]: stats interval size, (m) 1 minute, (s) 15s, else, Real Time

• Limitations

- Run on oracle client 11.2 and 12cR1
- Statistic_level=Typical



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