

Oracle DB 11g R2 New Features

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Solid Foundations
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Available Ports

- Linux 32/64
- Solaris 32/64

Other ports?



ASM Enhancements

- ASM Cluster File System (ACFS)
 - Not OCFS-2
- ASM Dynamic Volume Manager (DVM)
 - “kernel-loadable device driver that provides a standard device driver interface to clients (for example, ACFS”
- ASM FS Snapshot
 - “point-in-time copy of a file system and can provide up to 64 snapshot images, leveraging Copy on Write”
- ASM Intelligent Data Placement
 - Disk Group *configuration* for hot regions

MEMORY_TARGET

- System-wide Oracle memory
 - Includes SGA, PGA
 - Shadow process memory not included
- Default = 0 (enabled)

1040 Form
Department of the Treasury—Internal Revenue Service
1040 U.S. Individual Income Tax **1993** Return

Part 1. Income Your Social Security Number

1. How much money did you make last year?

2. Send It In.

3. If you have any questions or comments, please write them in the box provided.

Database Smart Flash Cache

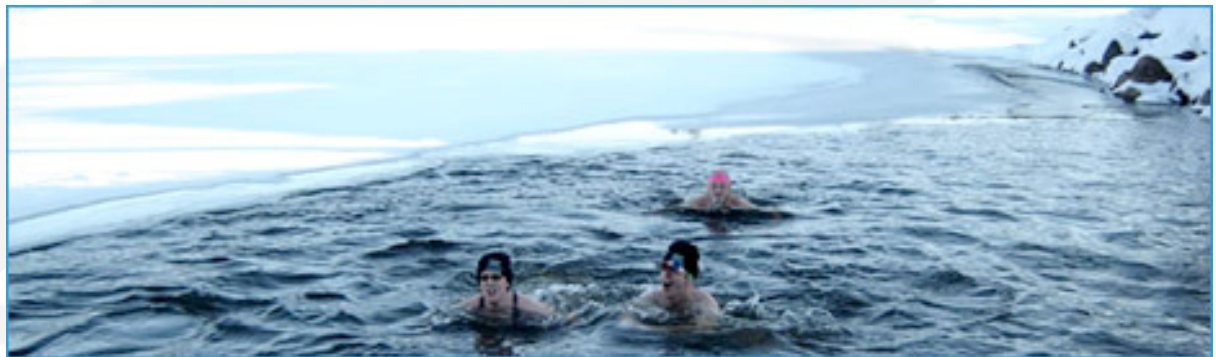
- 2nd level Database Buffer Cache
- Solid state device (SSD) technology
- `db_flash_cache_file`, `db_flash_cache_size`

“Database Smart Flash Cache is *available* only in Solaris and Oracle Enterprise Linux” (11.2 Concepts)

Only *supported* on the Solaris or Oracle Enterprise Linux operating systems (11.2 Admin Guide)

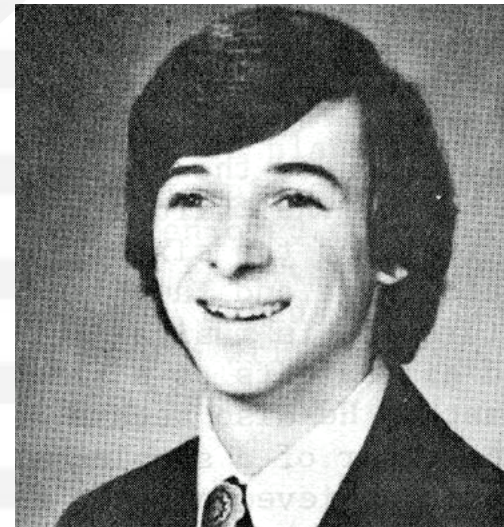
Result Cache

- In the Shared Pool?!??
- SQL hint, or RESULT_CACHE clause in either a function declaration or definition
- Recommend result_cache_mode MANUAL (default) to start



Oracle Restart

- DB instance
- Listener
- ASM
- Other application processes



What I looked like when they *should* have released this feature!

Automatic Block Repair

- Either end of Physical Standby Data Guard
- Grabs a good block image from other side
- Requires Real-time Query Mode
 - new in 11.1, an extra fee Data Guard feature



RMAN Duplicate Enhancements

- No connection to TARGET
- NOREDO
 - Archive logs not applied
 - Without TARGET, can't check for NOARCHIVELOG
- UNDO TABLESPACE *<tsname> ...*
 - Without TARGET and CATALOG, RMAN needs told tablespaces with undo segments



Enhanced Compression

- 4:1 ratio
- Block-level
- Variable-length
- Batched up
- Great for full table scans
- Not so hot for random reads
- Paid add-on
 - License: \$11,500 per processor
 - Updates/Support: \$2,530 per processor



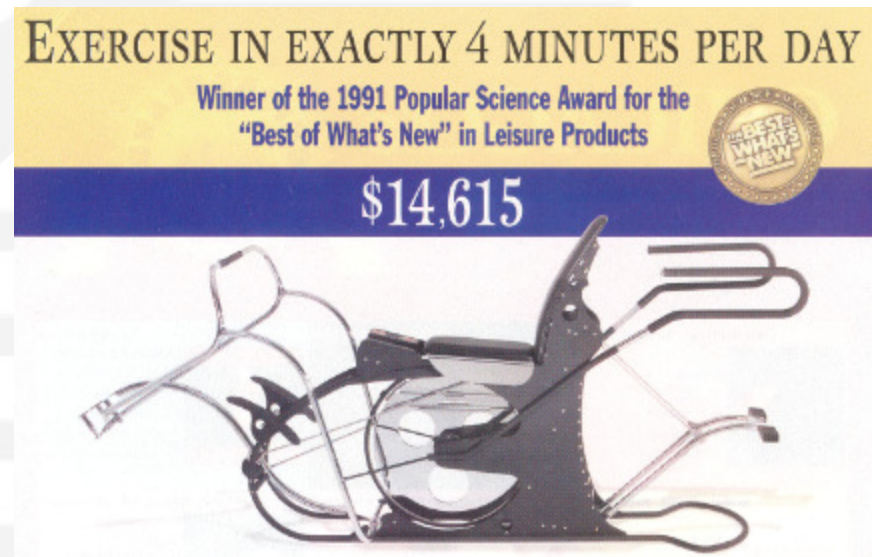
IPV6 Support

- JDBC Thin Clients
- JVM



SQL Plan Management

- Stored Outlines
 - “Stored outlines lack the flexibility and adaptability of SQL Plan Management” (11gR2 New Features)
 - Still take precedence
- Recommendations:
 - Review Oracle 11gR2 Optimizer White Papers
 - Functional regression testing!

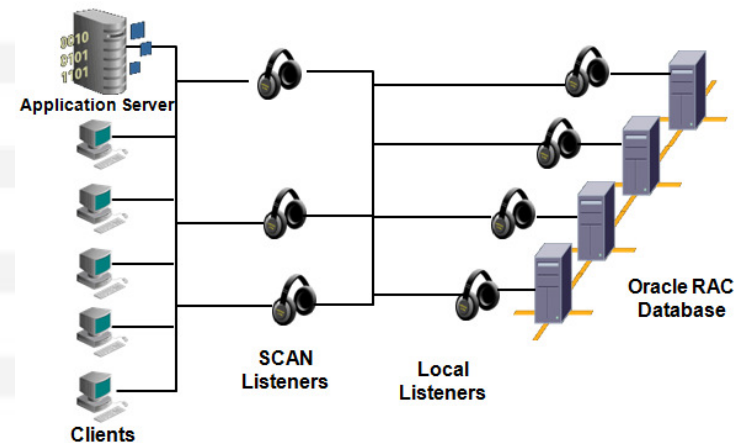


RAC Enhancements

- Enhanced Cluster Verification Utility
- OCR and Voting disks now in ASM
 - Voting disk auto backed-up into OCR (no more dd backups!)
- Clusterware & ASM: now consolidated “Grid Infrastructure” install
 - Same Oracle Home
- Install recovery points
- OUI Clusterware de-install *works*
- OPROC & Linux hangcheck deprecated

RAC Enhancements--Network

- Single Client Access Name (SCAN)
 - RAC node additions don't require tnsnames.ora edits
 - A hostname in the DNS server
 - Resolves to 1-3 IPs in public network
 - Clients connect to SCAN (no longer VIP)
- Multiple Public Networks
- DHCP Support for IPs and VIPs



RAC Deinstall Utility

- Stops processes
- Removes homes
- Removes disk groups
- Cleans up CRS, Voting disks
- Removes oratab entries
- Cleans up inventory



RAC One Node

- Announced during VMworld '09
 - Wasn't fully baked
- “No downtime for app users”
- “Live migration”
- “Omotion”
- Database “virtualization”
- “Baby RAC”
- Pricy
- RISC ports: consider it
- Linux/Windows: non-starter
- My blog



When to Upgrade?

- DB: 1st patch set + months
- ASM or Clusterware: pretty soon?
- Watch
 - My Oracle Support “Known Issues”
 - Google
 - My blog
- Get on my DB upgrade list



Thank You

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