

SH'OUUG

SHANGHAI ORACLE USERS GROUP

上海ORACLE用户组



SH'OUUG

Oracle 12.2 feature preview

by 刘相兵, Nov 2016

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macleandeMacBook-Pro:~ maclean$ whoami  
maclean
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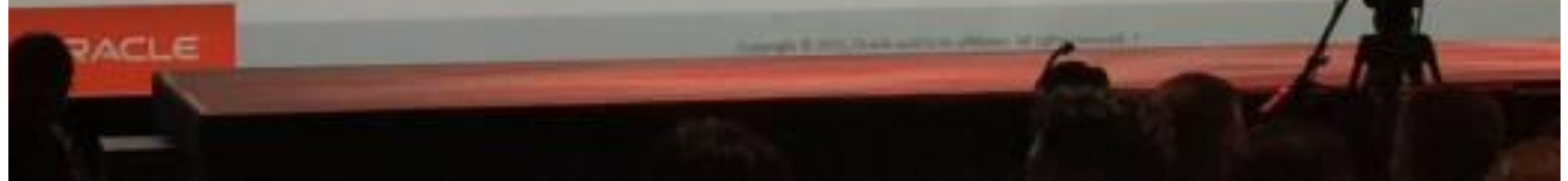


议程

• DB CORE 12.2 feature preview

12.2 release? When ?

development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle. The expected release for Oracle Database 12.2 is planned within the next twelve months.



12.2 release? When ?

Oracle Release	Release Years	Elapsed Years
Oracle 6	1988	
Oracle 7	1992	4
Oracle 8	1997	5
Oracle 8i	1998	1
Oracle 9i	2001	3
Oracle 10gR1	2004	3
Oracle 10gR2	2005	1
Oracle 11gR1	2007	2
Oracle 11gR2	2009	2
Oracle 12cR1	2013	4
Oracle 12cR2	2016末 ? 2017	3 or 4

12.2 Beta Test? TRY IT !

- Oracle Product Development Beta Testing Candidate Profile Form
<https://pdpm.oracle.com/pls/apex/f?p=102:2:8236828102171::::>

Or

甲骨文客户顾问委员会(CAB, CUSTOMER ADVISORY BOARD)

12c Release 2 include

- PDB Improved Agility and Capacity with Enhancements to Oracle Multitenant
- IM Refinements to Oracle Database In-Memory
- BIG DATA Enhanced Support for Big Data Analytics
- Hundreds of other new features

12c Release 2 include (1) CONTAINER

- APPLICATION CONTAINER Most Pluggable Databases share application objects.
- PLUGGABLE DATABASES With the release of 12c we first heard about pluggable databases. It was a great addition, but you could only get 252 of them per managed database instance. Oracle now increased that number dramatically. To 4096.
- HOT CLONING you can now get a running database and clone it towards a new instance (on-premise or on the cloud), without killing it or losing data.
- <https://pdpm.oracle.com/pls/apex/f?p=102:2:8236828102171:::>

12c Release 2 include (2) CONTAINER

- Flashback PDB
- 4096 PDB's
- Subset Standby For PDB
- PDB refresh

12c Release 2 include (1) in memory

- In-memory dynamic resizing of IM
- In-memory Virtual Column
- Active Data Guard uses In-memory
- New Initializations parameter: Memory_LIMIT & MEMORY_MIN(work similar to PGA_AGGREGATE_LIMIT)



12c Release 2 include (1) Sharding

Oracle 搞Sharding 没有技术难题！

12c Release 2 include (2) Sharding

- Oracle Sharding提供的是企业级的RDBMS的分片技术
- Oracle Sharding的优点
 - Relational schemas
 - Database partitioning
 - ACID properties and read consistency
 - SQL and other programmatic interfaces
 - Complex data types
 - Online schema changes
 - Multi-core scalability
 - Advanced security
 - Compression
 - High Availability features
 - Enterprise-scale backup and recovery
 - 在Oracle RDBMS 12.2.0.1中最多支持1000个shards。

12c Release 2 include (3) Sharding

在这个NOSQL sharding满天飞的时代，Oracle将以完美支持SQL、事务、并行、丰富查询功能的姿态一头扎向sharding的怀抱。

12c Release 2 Sharding PayPal Tried

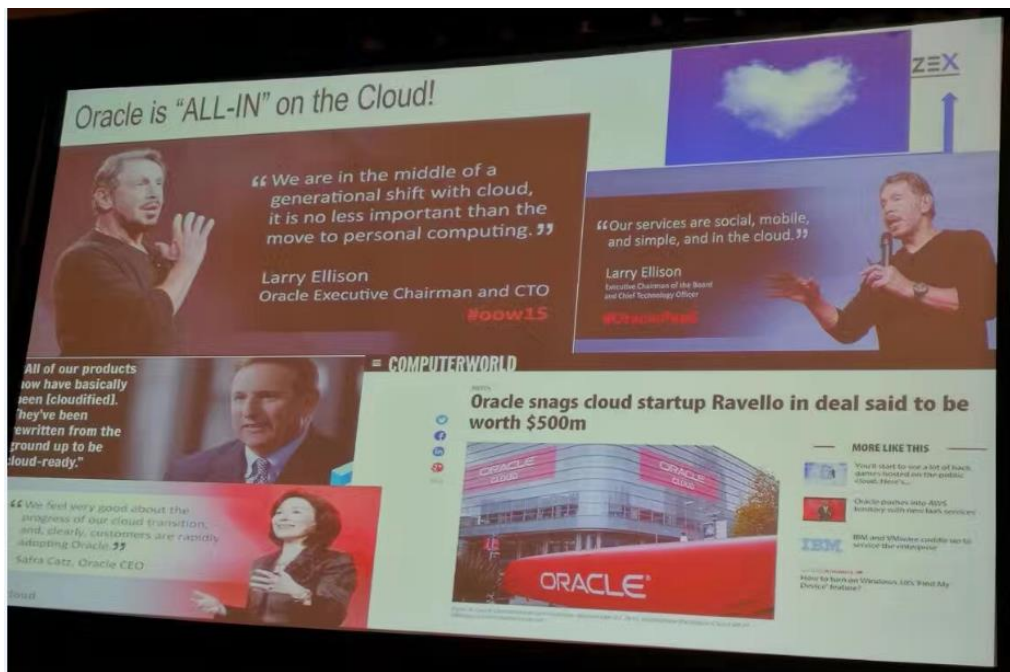
- What They liked:
 - 自动化配置，创建和管理分片和路由
 - 支持跨分片的查询
 - 对于分片管理的SQL语法，我们很有亲切感
 - 两层分片技术
 - 一致性哈希算法让新分片加入时不需要做大数据的迁移
 - 动态加减分片数目
- 注意事项：
 - 有了sharding，那么要更注重数据模型和数据设计
 - 对每个分片启用连接池限制

12c Release 2 Sharding May it be ...

- Oracle Core Database
- 支持多核+大内存 区别于ORACLE XE , core database收费但比ORACLE EE便宜
- 可能不支持RAC , 纯粹为shard设计
- 使用RPM安装 , 安装配置更简单 , 不基于oracle universal installer

12.2 Other key features....

- External Tables to read hadoop tables
- Multi-Instance Redo Apply for physical standby
- RMAN check disk space for recover table
- 32k default for varchar2
- 128 characters for object_name: table,column,index,constraint,users,roles....etc
- Optimizer statistics advisor
- Encryption improvement - TDB in DB
- Approximate Query
- Continuous Adaptive Query
- Improved HCC (Inserts/ APPEND)
- ADO HEAT MAP (Automatic Data Optimization)
- Better Index Compression
- Gold/Silver/Bronze DB or PDB
- Many ASM improvement (Split Mirror For Exadata)
- Split/Merge Partitions Online
- Other New Online operations
- Some New background processes
- Restart a redefinition from failure
- Rollback a redefinition
- Cloud-First available!



Using, Learning & Sharing

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