
Oracle 11g Gems



presentation for:





Victoria Oracle Users Group

January-February 2008

Daniel A. Morgan



Who am I?

- Daniel Morgan
- Oracle Ace Director 
- University of Washington 
 - Wrote UW Oracle curricula
 - Primary program instructor - 8 years
- Education Chair: PSOUG 
- Member: UKOUG 
- Frequent speaker – OOW and user group events
- 10g, 11g, and TimesTen Beta tester
- Oracle since version 6
- Too many years of Fortran and COBOL
- Contact: damorgan@u.washington.edu



Additional Resources

SQL University

www.sqluniversity.net

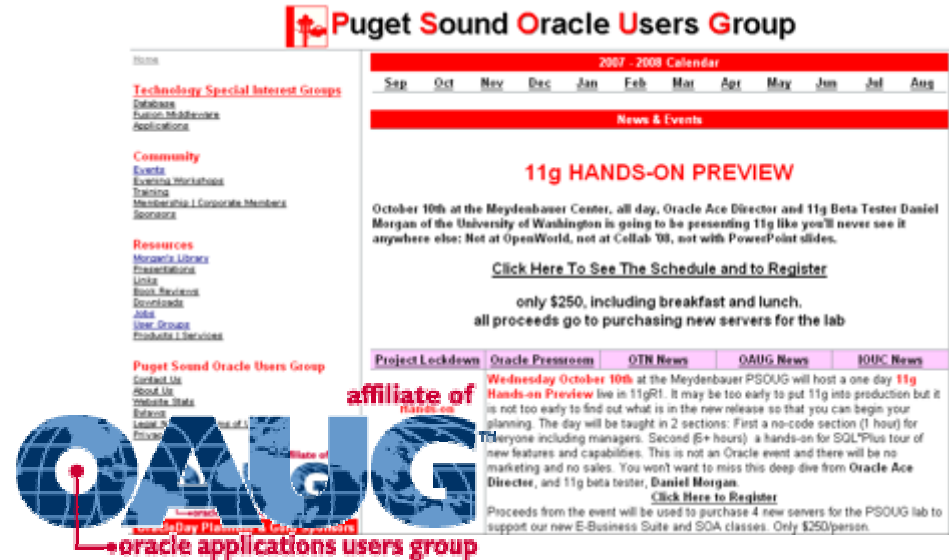
Streaming Video



Morgan's Library

www.psoug.org

Demo Source Code



Daniel A. Morgan



Cary Millsap



"Oracle Performance Management Using Response Time Profiling"

February 19 - 21 ... reserve your seat today

[Click Here for Details](#)

When: February 19 – 21

Where: Mount Si Room, 2nd floor, 500 108th Av NE, Bellevue, WA

Price: \$1,500 USD – (special PSOUG price)

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Lab Hardware



HP DL360 G3 dual proc dual core server used as a repository for RMAN classes.

DUG's Pillar Data Systems Axiom 500 SAN 8 of disk allows members the abilities to work in a production fibre-channel environment when learning RAC, or ASM, or other technologies and contains enough room for a full-size Apps install.



NetApp 270C NAS with 1TB disk

NetApp 720 and FC9 for iSCSI





APRIL 13-17, 2008
COLORADO CONVENTION CENTER
DENVER, COLORADO

COLLABORATE 08, featuring the OAUG Forum, will offer more than **500 presentations** facilitated by industry experts, members of the OAUG and Oracle.

Early Bird Registration Deadline

March 13

Exhibitor Showcase Sales

Now open

For additional information and to register

<http://oaug.collaborate08.com>

What is a gem

- Something of value
- Something that requires effort to uncover
- As with the industrial uses for diamonds and sapphires
- Something that can be put to an industrial use.
- Requires polishing



Gems – The Short Program

- Architecture
 - BDUMP and UDUMP are gone
 - SQL*Plus (Windows is gone)
- Bugs – **do I have a good one for you <g>**
- Security
 - Passwords can be case sensitive
 - New System privileges
- SQL Changes
 - READ ONLY Tables
 - Virtual Columns
- PL/SQL Changes
 - Sequences
 - Follows Clause
 - PL/SQL Warnings
- WM_CONCAT Function



9i and 10g New Features – You May Have Missed

- Explain Plan w/ dbms_xplan
- ORA_ROWSCN pseudocolumn
- Collecting System Statistics
- DBMS_ASSERT
- DBMS_SPACE



Gems - Architecture

- ADR
 - BDUMP and UDUMP Deprecated
 - \$ADR_BASE and \$ADR_HOME
 - ADRCI
- Tools
 - SQL*Plus Windows
- Passwords
 - Case Sensitive
- PFILE
 - CREATE FROM MEMORY
- Flashback Archive



Gems - Architecture

- **Tablespaces**

- Exabytes
- Compressed
- SecureFiles
 - compression
 - deduplication
 - encryption

Kilobyte	1,000
Megabyte	1,000,000
Gigabyte	1,000,000,000
Terabyte	1,000,000,000,000
Petabyte	1,000,000,000,000,000
Exabyte	1,000,000,000,000,000,000

billions of gigabyte

- **SELECT**

- FOR UPDATE SKIP LOCKED
- Cross Tabulation
 - PIVOT
 - UNPIVOT
- REGEXP_COUNT
- SQL Result Cache



Gems - SQL

- Tables
 - READ ONLY
 - Compression
 - Transparent Data Encryption
 - Virtual Columns
- Partitioning
 - Partition by Interval
 - Partition by Reference
 - Partition by System
 - Composite Partitions
- Indexes
 - Invisible



Gems - SQL

- Explain Plan
 - `dbms_xplan` review
 - `dbms_xplan.build_plan_xml`
 - `dbms_xplan.display_plan`
- Mixed Notation
- DICOM
- XML Functions



Gems – PL/SQL

- Native Compilation
 - SIMPLE_INTEGER data type
- Sequences
- Loops
 - CONTINUE Statement
- Table Triggers
 - FOLLOWS Clause
 - Composite Triggers
- PL/SQL Result Cache
- PL/SQL Warnings
- PLscope
- PRAGMA INLINE



Gems – Built-in Packages

- Advanced Queuing
 - GET_MAILHOST
 - GET_MAILPORT
 - GET_PROXY
 - GET_SENDFROM
 - HTTP_SEND
 - SEND_PROXY
- DBMS_ADVISOR
 - Run library demo
- DBMS_AUTO_TASK_ADMIN
 - DBMS_AUTO_TASK
- DBMS_AUTO_TASK_IMMEDIATE



Gems – Built-in Packages

- DBMS_COMPARISON
 - COMPARE
 - CONVERGE
 - CREATE_COMPARISON
 - RECHECK
- DBMS_CONNECTION_POOL
- DBMS_CSX_ADMIN
- DBMS_DATAPUMP
- DBMS_DG
 - INITIATE_FS_FAILOVER
- DBMS_EDITIONS_UTILITIES



Gems – Built-in Packages

- **DBMS_FLASHBACK**
 - Transaction Backout
- **DBMS_HPROF**
 - replaces DBMS_PROFILER
- **DBMS_HM (Health Management)**
 - GET_RUN_REPORT
 - RUN_CHECK
- **DBMS_IR (Intelligent Repair)**
- **DBMS_LOB**
 - Deduplication
 - SecureFiles



Gems – Built-in Packages

- DBMS_METADATA
 - COMPARE_ALTER
 - COMPARE_ALTER_XML
 - COMPARE_SXML
 - GET_DEPENDENT_DDL
 - GET_GRANTED_DDL
- DBMS_MONITOR
 - DATABASE_TRACE_ENABLE
 - DATABASE_TRACE_DISABLE
- DBMS_NETWORK_ACL_ADMIN
- DBMS_NETWORK_ACL_UTILITY



Gems – Built-in Packages

- DBMS_REDEFINITION (now handles MView Logs)
- DBMS_RESOURCE_MANAGER
 - CALIBRATE_IO
- DBMS_RESULT_CACHE
- DBMS_SPM (SQL Plan Management)
- DBMS_SQL & NDS (now supports CLOBs)
- DBMS_SQLDIAG
- DBMS_SQLPA
- DBMS_STATS



Gems – Built-in Packages

- DBMS_STREAMS_ADM
- DBMS_STORAGE_MAP
- DBMS_WORKLOAD_CAPTURE
- DBMS_WORKLOAD_REPLAY
- DBMS_WORKLOAD_REPOSITORY
 - COLORED SQL
 - ASH REPORT
 - BASELINES
- DBMS_XA



Health Warning

Due to complaints made to the Minister of Health ...



You are now entering ...

... a ...



Gems - Architecture

- DBMSOBJG
 - CHECK_PERMISSIONS
- DBMS_DIMENSION
 - DESCRIBE_DIMENSION
 - VALIDATE_DIMENSION
- DBMS_FEATURE_USAGE_REPORT
 - DISPLAY_HTML
 - DISPLAY_TEXT
- DBMS_I_INDEX_UTL
 - GET_REBUILD_COMMAND
- DBMS_INDEX_UTL
 - BUILD_INDEXES
 - BUILD_SCHEMA_INDEXES
 - BUILD_TABLE_INDEXES

