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# Vancouver User Group

[www.vanoug.org](http://www.vanoug.org)




January 2010 Meeting



# Introduction

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- Daniel Morgan – [damorgan@u.washington.edu](mailto:damorgan@u.washington.edu)
- Oracle Ace Director 
- University of Washington, retired
- The Morgan of Morgan's Library on the web
  - [www.morganslibrary.org/library.html](http://www.morganslibrary.org/library.html)
- Member: Western Washington Oracle Users Group
- Member: UK Oracle Users Group
- Member: Oracle Applications Users Group
- Frequent speaker



- Oracle since version 6
- 11g beta test site



# Morgan's Library: [www.morganslibrary.org](http://www.morganslibrary.org)

**Morgan's Library**

www library

**Morgan's 2009 - 2010 Calendar**

Sep Oct **Nov** Dec Jan Feb Mar Apr May Jun Jul Aug

**Oracle OpenWorld**

Oct. 11 - 15, 2009  
Moscone Center  
San Francisco, CA

**ORACLE OPEN WORLD**

```
SELECT seat
INTO scheduleBuilder
FROM oov2009
WHERE session_id = 'S307422'
AND title = 'Oracle Advanced Compression in Database 11g Rel. 2: Value/Performance'
AND sessn_date = TO_DATE('15-OCT-2009 09:00:00', 'DD-MON-YYYY HH24:MI:SS')
AND location = 'Moscone South, Room 102'
AND copresenters = 'ACE Director Dan Morgan and Oak Table Member Kevin Closson';
```

**Community**

[Events](#)  
[Training](#)  
[Evening Workshops](#)

**Resources**

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**Presentations Map**

**Our Founder**

**Training Events**

- [Oracle ClosedWorld](#) - Oct 11-15, San Francisco
- [Miracle 9th Anniversary](#) - Oct 30, Ballerup, DK
- [OUGE](#) - Nov 5, Helsinki, Finland
- [UKOUG](#) - Nov 30 - Dec 2, Birmingham, UK
- [RMOUG](#) - Feb 16 - Feb 18, Denver, CO
- [NZOUG](#) - Mar 15 - Mar 16, Rotorua, NZ
- [OUGN](#) - Apr 14-16, Oslo Norway

**Oracle Events**

- [Oracle OpenWorld](#) - Oct 11-15, San Francisco

**ORACLE OPEN WORLD** Sign up for Session S307422  
Oracle Advanced Compression  
Thursday Oct. 15  
9:00am, Moscone South, Room 102

**Morgan**

aboard USA-71

**Library News**

- [Morgan's Notepad vi \(Blog\)](#) UPDATED
- [Western Washington OUG](#) NEW
- [Morgan's Oracle Podcast](#)
- [DBA Best Practice Guidelines](#)
- [Bryn Llewellyn's 2009 White Paper](#)
- [Troubleshooting Performance](#)
- [Translators Wanted:](#)

**ACE News**

Would you like to become an Oracle ACE?

Learn more about becoming an ACE

- [ACE Directory](#)
- [ACE Google Map](#)
- [ACE Nomination Form](#)
- [Stanley's Blog](#)





# VanOUG

## Vancouver Oracle Users Group



### Database 11gR2 Rollout

January 14, 2010  
11:30am - 4:30pm



Thursday, January 14, 2010 Tom Kyte will be providing the keynote address at Oracle's 11gR2 rollout and VanOUG will be holding its first meeting.

To Find Out More  
And Register:

Register

### Vancouver Oracle User Group Renewal Meeting

January 14, 2010  
4:30pm - 5:00pm



Following the Oracle Database 11gR2 Rollout we will be holding a meeting to reform the Vancouver Oracle Users Group.

Oracle ACE Director Dan Morgan and Victoria Oracle Users Group Chairman Caleb Small will be joining us to help us bring the group back together and don't be surprised if Morgan does live demos of an 11gR2 feature not covered by Oracle. He's been known to do that .. Registration is not required but an [email](#) will be appreciated. Thank you.

After the brief VanOUG meeting please join us, and Oracle, for cocktails.

Links

[Oracle Corporation](#)

[Oracle Technology Network](#)

[www.vanoug.org](http://www.vanoug.org)



# This is your group. What do you want it to be?

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- What is a user group?
  - Presentations, training, conferences, guest lectures
  - Networking
  - An opportunity to learn what your salesperson doesn't know
- What isn't a user group?
  - A canned audience for salespeople
- Where do you want to meet (location)
- When do you want to meet (day of the Week)
- Time of Day (during work or after work)
- Topics (DBA, Developer, Middleware, third-party products)
- Leadership (local leadership is required for success)



# WWOUG Yesterday

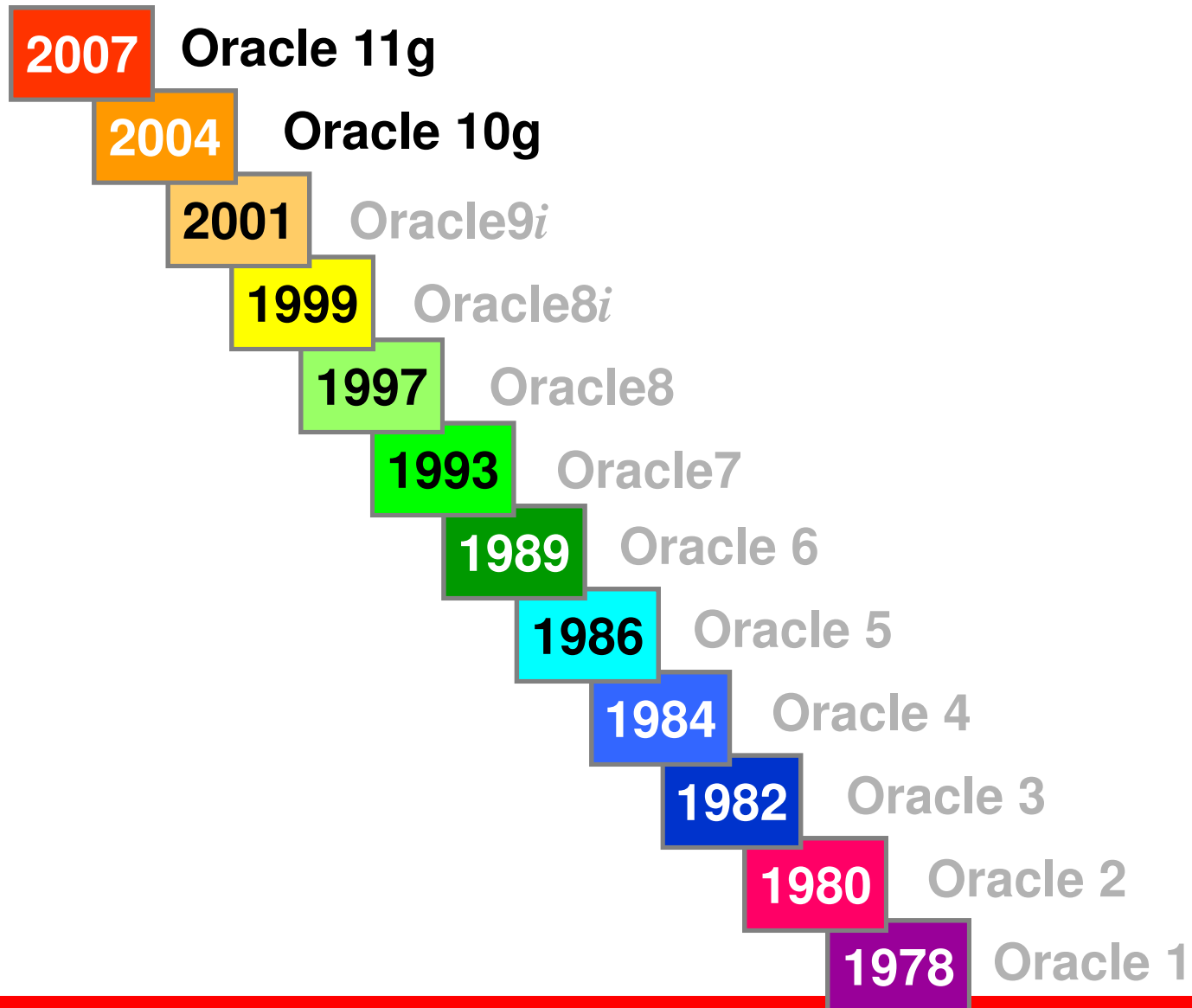
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- Panel discussion on moving to 11gR1 or R2
  - Jeremiah Wilton (First Senior DBA at Amazon.com)
  - Matt Parker (Amazon.com)
  - Rand Bell (Starbucks)
- Topics
  - Our experience with performance/migration issues
  - Amazon.com is giving us their wiki for the 16min upgrade
  - How best to create the 11g infrastructure (new home?)
  - What is the most compelling feature/reason to move to 11g?



# Oracle Server History

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# New in 11gR1

That you will not hear about from Oracle



# New in 11gR1

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- ADR
- Case Sensitive Passwords
- Query for default passwords ←
- SKIP LOCKED
- Pivot & Unpivot Operators
- Compound Triggers
- Trigger Follows Clause
- New PL/SQL Warnings
- Vastly Improved Native Compilation



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# New in 11gR2

That you will not hear about from Oracle



# What Oracle Isn't Talking About

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- Structure Changes in the ADR
- DataGuard Compressed Table Support for Logical Standbys and LogMiner
- DataPump Legacy Mode



# Execute for Directory Objects

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- In 10g we granted READ and/or WRITE
- But this also allowed executing the ORACLE\_LOADER access driver
- Only a user that has been given EXECUTE access to the directory object is allowed to run programs in it

```
CREATE DIRECTORY stage AS '/home/oracle/stage';
```

```
GRANT read ON stage;
```

```
GRANT write ON stage;
```

```
GRANT execute ON stage;
```



# RMAN

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- Automatic Block Repair
- New options for DUPLICATE DATABASE
- Enhanced Tablespace PITR



# Storage

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- Tablespaces
  - Enhancements to SecureFiles
  - New Tablespace Master Rekey with Wallets
- Tables
  - Segment creation on demand



# SQL

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- New Analytic Functions
  - LISTAGG
  - NTH\_VALUE
  - RESPECT or IGNORE NULLS

```
SELECT department_id "Dept.",  
LISTAGG(last_name, ';' ') WITHIN GROUP (ORDER BY hire_date) "Employees"  
FROM employees  
GROUP BY department_id;
```

```
SELECT prod_id, channel_id, MIN(amount_sold),  
NTH_VALUE(MIN(amount_sold), 2)  
  OVER (PARTITION BY prod_id ORDER BY channel_id ROWS  
        BETWEEN UNBOUNDED PRECEDING AND UNBOUNDED FOLLOWING) NV  
FROM sales  
WHERE prod_id BETWEEN 13 AND 16  
GROUP BY prod_id, channel_id;
```

```
FIRST_VALUE(<expression> [RESPECT | IGNORE> NULLS]) OVER (<analytic clause>)
```





# SQL

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- ALTER DATABASE LINK
- IGNORE\_ROW\_ON\_DUPKEY\_INDEX Hint for INSERT Statement
- DATABASE\_ROLE parameter FOR SYS\_CONTEXT function
  - PRIMARY
  - PHYSICAL STANDBY
  - LOGICAL STANDBY
  - SNAPSHOT STANDBY

```
SELECT sys_context ('USERENV', 'DATABASE_ROLE') FROM dual;
```



# SQL

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- Recursive Queries
  - CONNECT BY
- Recursive Common Table Expressions (WITH)

```
WITH <alias> AS
    (subquery_sql_statement)
SEARCH <BREADTH | DEPTH>
    FIRST BY <column_name> [ASC | DESC] [NULLS FIRST | NULLS LAST]
SET <ordering_column>
CYCLE (alias) SET <cycle_mark_alias>
    TO <cycle_value> DEFAULT <no_cycle_value>
SELECT <column_name_list>
FROM <alias_one>, <alias_two>
WHERE <join_condition>;
```



# PL/SQL

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- New Warnings

- Severe

- 5018 - omitted optional AUTHID clause
- 5019 - deprecated language element
- 5020 - parameter name must be identified

- Informative

- 6016 - native code generation turned off (size/time)
- 6017 - operation will raise an exception
- 6018 - an infinity or NaN value computed or used

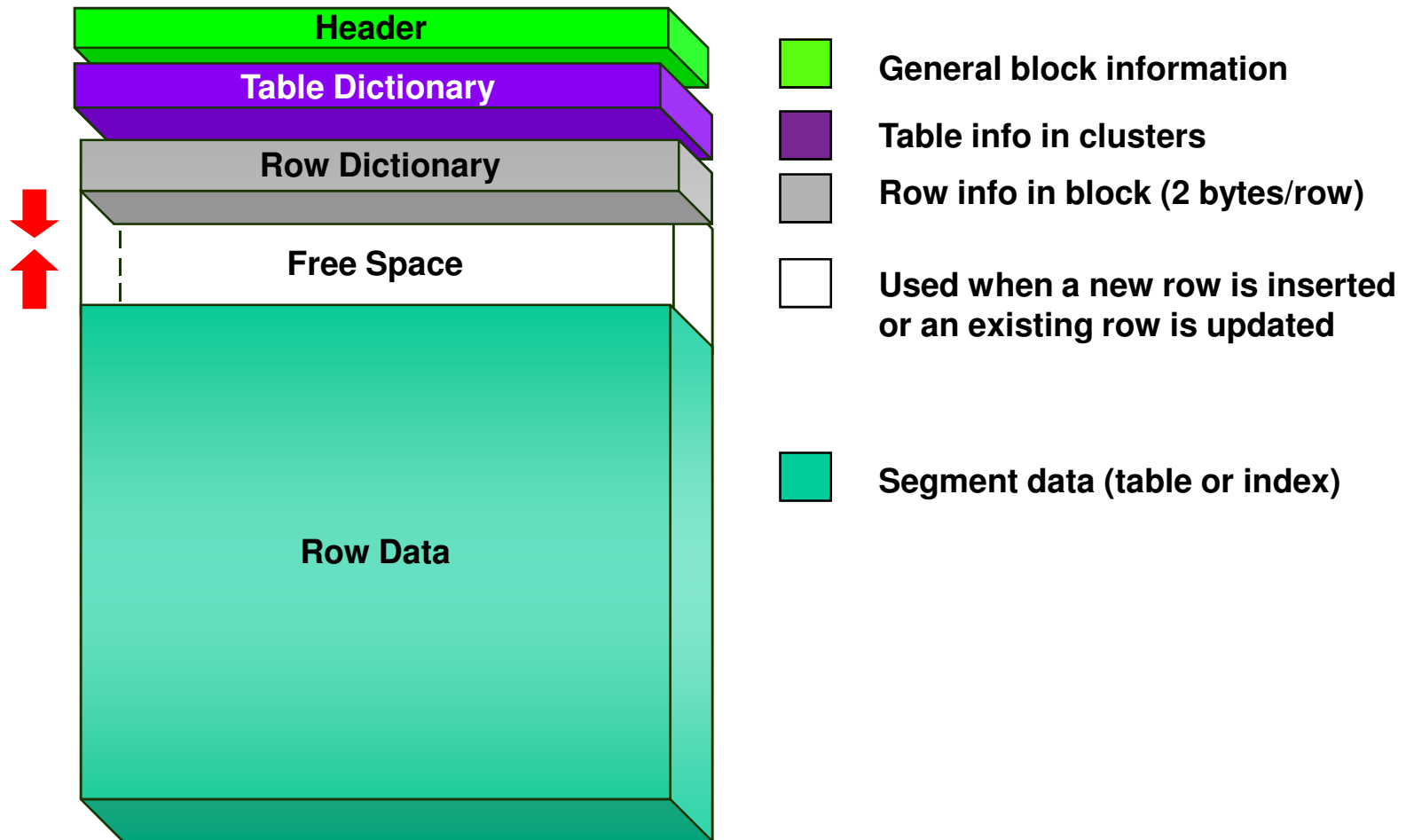
- Performance

- None



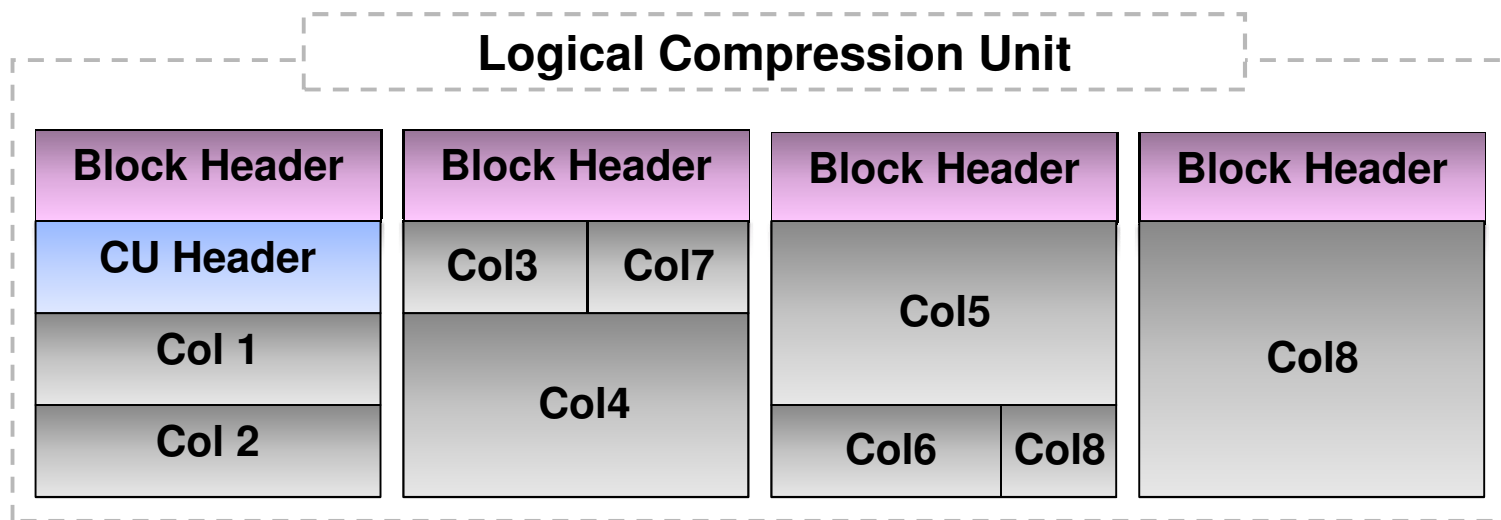
# Database Block Anatomy

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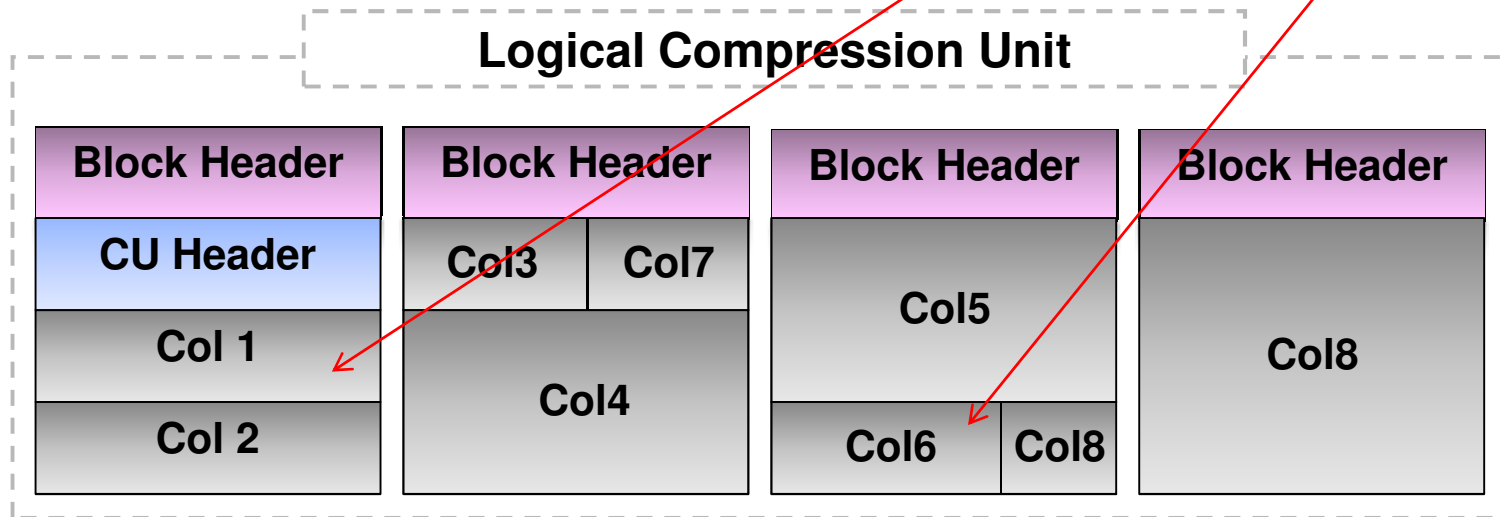
# Logical Compression Unit

- Tables are organized into Compression Units (CU)
  - CU's are logical structure spanning multiple database blocks
    - Typically 32K - (4 x 8K block size)
  - Data is organized by column during data load
  - Each column is compressed separately
  - Column organization brings similar values close together



# Logical Compression Unit

```
CREATE TABLE demo (  
  person_id      NUMBER(10),  
  first_name     VARCHAR2(20),  
  mid_initial    VARCHAR2(4),  
  last_name      VARCHAR2(35),  
  date_of_birth  DATE,  
  hire_date      DATE,  
  status         VARCHAR2(5),  
  comments       VARCHAR2(500));
```



Help Us Build A Vibrant User Community in Vancouver

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**[www.vanoug.org](http://www.vanoug.org)**



**Thank you.**

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