

The DBA Survival Kit

EMEA Tour, OUGN, November 2026

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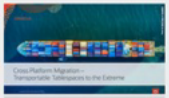
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Virtual Classroom Seminars	Slides
Episode 16 (replaces Episode 1 from Feb 2021) Oracle Database Release and Patching Strategy for 19c and 23c *115 minutes – May 10, 2023*	
Episode 17 From SR to Patch – Insights into the Oracle Database Development process *55 minutes – June 22, 2023*	
Episode 18 Cross Platform Migration – Transportable Tablespaces to the Extreme *145 min – February 22, 2024*	
Episode 19 Move to Oracle Database 23ai – Everything you need to know about Multitenant PART 1 *145 min – May 16, 2024*	
Episode 20 Move to Oracle Database 23ai – Everything you need to know about Multitenant PART 2 *100 min – June 28, 2024*	
Episode 21 One-Button Patching with AutoUpgrade – Easing every DBA's life *55 min – October 24, 2024*	

Recorded Web Seminars

https://MikeDietrichDE.com/videos

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On-demand, anytime, anywhere


IT'S MONDAY MORNING
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```
$ sqlplus daniel@mydb1

SQL*Plus: Release 19.0.0.0.0 - Production on Fri Oct 9 12:26:32 2026
Version 19.31.0.0.0

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ERROR:
ORA-12154: TNS:could not resolve the connect identifier specified
```


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Which tnsnames.ora?

- Current directory
- `TNS_ADMIN` environment variable
- `$ORACLE_HOME/network/admin`
- `$ORACLE_BASE_HOME/network/admin`
- `TNS_ADMIN` registry key (Windows)
- `/etc`

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New In 26ai

```
$ sqlplus daniel/password@mydb1

SQL*Plus: Release 23.26.3.0.0 - Production on Fri Oct 9 12:26:51 2026
Version 23.26.3.0.0

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ERROR:
ORA-12154: Cannot connect to database. Cannot find alias mydb1 in
/u01/app/oracle/product/26/network/admin/tnsnames.ora.
Help: https://docs.oracle.com/error-help/db/ora-12154/
```


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New In 26ai

```
SQL> show conn nets
Local Net Naming configuration file:
/u01/app/oracle/product/26/network/admin/tnsnames.ora
HR
MYDB2
SALES
```


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New In 26ai

```
SQL> show conn nets
Local Net Naming configuration file:
/u01/app/oracle/product/26/network/admin/tnsnames.ora
HR
MYDB2
SALES

SQL> show conn nets SALES
Local Net Naming configuration file:
/u01/app/oracle/product/26/network/admin/tnsnames.ora
SALES = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)
(PORT = 1521)) (CONNECT_DATA = (SERVICE_NAME = sales)))
```


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New In 26ai

```
SQL> ping SALES
Local Net Naming configuration file:
/u01/app/oracle/product/26/network/admin/tnsnames.ora
Attempting to contact: (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)
(HOST = localhost)(PORT = 1521)) (CONNECT_DATA = (SERVICE_NAME = sales)))
Ok (1.815 msec)
```


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New In 26ai

```
SQL> select sysdate from dual;

SQL> select sysdate;
```


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New In 26ai

```
SELECT TRUNC(created) AS created_day,
       object_type,
       COUNT(*) AS object_count
FROM   dba_objects
WHERE  created >= TRUNC(SYSDATE) - 30
GROUP BY TRUNC(created), object_type;
```

Aggregate function

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New In 26ai

```
SELECT TRUNC(created) AS created_day,
       object_type,
       COUNT(*) AS object_count
FROM   dba_objects
WHERE  created >= TRUNC(SYSDATE) - 30
GROUP BY 1,2;
```


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New In 26ai

```
SELECT TRUNC(created) AS created_day,
       object_type,
       COUNT(*) AS object_count
FROM   dba_objects
WHERE  created >= TRUNC(SYSDATE) - 30
GROUP BY ALL;
```


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New In 26ai

```
alter session set group_by_position_enabled=true;

SELECT TRUNC(created) AS created_day,
       object_type,
       COUNT(*) AS object_count
FROM   dba_objects
WHERE  created >= TRUNC(SYSDATE) - 30
GROUP BY ALL;
```


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Generate a report on differences between two Release Update

- oradiff.oracle.com

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DEMO

ORAdiff
List differences



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Download all patches in one command

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Download Patches

- Release Update and MRP/CSPU
- OPatch, JDK, OJVM, OCW
- Data Pump, Spatial and Oracle Text Bundle Patches
- One-off patches
- Grid Infrastructure
- Exadata
- Enterprise Manager
- For different platforms and releases

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```
global.global_log_dir=/home/oracle/autoupgrade/logs
global.keystore=/home/oracle/autoupgrade/keystore
global.download_folder=/home/oracle/patch-repo

install1.platform=LINUX.X64
install1.target_version=19
install1.patch=RECOMMENDED,OCW,JDK,DPBP,SDOBP,TEXT,34234512
```


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```
global.global_log_dir=/home/oracle/autoupgrade/logs
global.keystore=/home/oracle/autoupgrade/keystore
global.download_folder=/home/oracle/patch-repo

install1.platform=LINUX.X64
install1.target_version=19
install1.patch=RECOMMENDED,OCW,JDK,DPBP,SDOBP,TEXT,34234512
```

```
java -jar autoupgrade.jar -config download.cfg -patch -mode download
```


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DEMO

Download patches Using AutoUpgrade

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AutoUpgrade also downloads ORDS, APEX and APEX patches

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Create new Oracle home
- matching the current Oracle home

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```
cat install19.cfg

   global.global_log_dir=/home/oracle/autoupgrade-patching/log
   global.folder=/home/oracle/autoupgrade/patches
   patch1.source_home=/u01/app/oracle/product/dbhome_19_32
   patch1.target_home=/u01/app/oracle/product/dbhome_19_33
   patch1.patch=RECOMMENDED
   patch1.create_gold_image=dbhome1933.zip
```

Settings

Patches

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```
cat install19.cfg

   global.global_log_dir=/home/oracle/autoupgrade-patching/log
   global.folder=/home/oracle/autoupgrade/patches
   patch1.source_home=/u01/app/oracle/product/dbhome_19_32
   patch1.target_home=/u01/app/oracle/product/dbhome_19_33
   patch1.patch=RECOMMENDED
   patch1.create_gold_image=dbhome1933.zip

java -jar autoupgrade.jar -config install19.cfg -patch -mode create_home
```


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Recompile Oracle Maintained objects

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```
@?/rdbms/admin/utlrp
```


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```
SQL> select owner, count(*)
     from dba_objects
     where status != 'VALID'
     group by owner;
```


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```
SQL> select owner, count(*)
     from dba_objects
     where status != 'VALID'
     group by owner;

OWNER                COUNT(*)
---------------- ----------
SYS                        24
OLD_APP                  4887
DANIEL                  76980
DANIEL1                 76980
DANIEL2                 76980
```


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```
-- Recompile just Oracle Maintained objects

@?/rdbms/admin/utlprpom <parallel-degree>
```

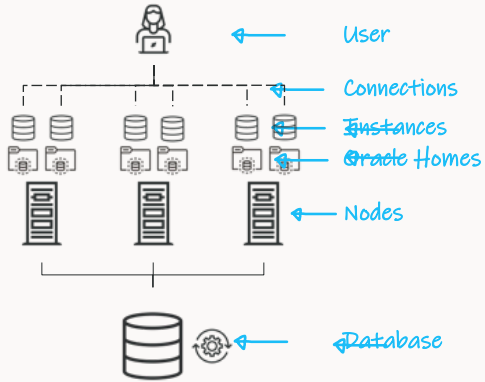

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RAC rolling patching with full control

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RAC Rolling Patching



- New DB home

```
autoupgrade.jar ... -mode create_home
```

- Move to new home

```
autoupgrade.jar ... -mode deploy
```


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```
global.global_log_dir=/home/oracle/autoupgrade-patching/log

patch1.sid=CDB191
patch1.source_home=/u01/app/oracle/product/dbhome_19_32
patch1.target_home=/u01/app/oracle/product/dbhome_19_33
patch1.rac_rolling=auto
```



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AutoUpgrade stops the service using the default drain timeout

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```
global.global_log_dir=/home/oracle/autoupgrade-patching/log

patch1.sid=CDB191
patch1.source_home=/u01/app/oracle/product/dbhome_19_31
patch1.target_home=/u01/app/oracle/product/dbhome_19_32
patch1.rac_rolling=auto
patch1.drain_timeout=300
```


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But my application doesn't drain ...

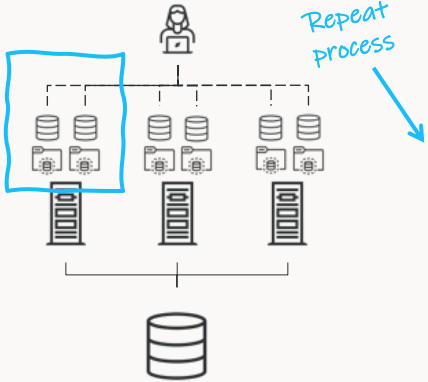
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```
global.global_log_dir=/home/oracle/autoupgrade-patching/log

patch1.sid=CDB191
patch1.source_home=/u01/app/oracle/product/dbhome_19_31
patch1.target_home=/u01/app/oracle/product/dbhome_19_32
patch1.rac_rolling=auto
patch1.drain_timeout=WAIT
```


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Controlling the Draining




```
autoupgrade.jar ... -mode deploy
```

```
srvctl relocate service \
   -stopoption TRANSACTIONAL \
   -drain_timeout 2592000 ...
```

```
upg> proceed -job 101
```

```
srvctl stop instance \
   -stopoption IMMEDIATE \
   -drain_timeout 0 ...
```


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drain_timeout

patch1.drain_timeout = WAIT

```
srvctl relocate service
-oldinst node1
-stopoption TRANSACTIONAL
-drain_timeout 2592000
-wait yes
-verbose

> proceed –job 101

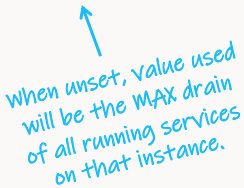
srvctl stop instance
-instance node1
-stopoption IMMEDIATE
-drain_timeout 0
-failover
-verbose
-force
```

patch1.drain_timeout = 120

```
srvctl stop instance
-instance node1
-stopoption IMMEDIATE
-drain_timeout 120
-failover
-verbose
-force
```

patch1.drain_timeout *(unset)*

```
srvctl stop instance
-instance node1
-stopoption IMMEDIATE
-failover
-verbose
-force
```



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Patching

- Webinar: Database Patching for DBAs – Patch smarter, not harder
- Blog post: The Easiest Way to Download 19.27 Release Update
- Blog post: Downloading and using Gold Image with AutoUpgrade
- Blog post: RAC Rolling mode in AutoUpgrade
- Blog post: How to patch Oracle Database using controlled RAC Rolling with AutoUpgrade
- Blog post: Announcing Oracle Update Advisor
- Hands-on lab: Patch Me If You Can

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DEMO

Regressing statement
Fix using SQL Plan Management



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What Happened?

- A statement regressed
- DBA executes `DBMS_SPM.ADD_VERIFIED_SQL_PLAN_BASELINE`
- It finds all previous executions of statement
  - Cursor cache, AWR, SQL tuning set, Automatic SQL Tuning Set
- Use SQL Plan Management Evolve Advisor to find best-performing plan
- Create SQL plan baseline with best-performing plan as *accepted* plan
- Next execution of statement uses the accepted plan

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Let's automate it

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Automatic SQL Plan Management







- User executes SQL
- Optimizer chooses a different execution plan
- Executes with new plan

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Automatic SQL Plan Management







- Background job (30 min)
- Finds resource-intensive SQLs
- Evaluate execution statistics against previous executions

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Automatic SQL Plan Management







- Creates a plan baseline with the best plan
- Next execution uses an accepted plan

- Oracle Database 19c Enterprise Edition, RU 19.22
- Exadata and Autonomous AI Database

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Real-Time SQL Plan Management







- User executes SQL
- Optimizer chooses a different execution plan
- Executes with new plan

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Real-Time SQL Plan Management







- Compares execution statistics with history
- Comparison is performed in the user foreground session

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Real-Time SQL Plan Management







- Creates a plan baseline with the best plan
- Next execution uses an accepted plan

- Oracle AI Database 26ai Enterprise Edition
- Autonomous AI Database 19c

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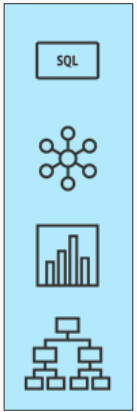


Automatically populate SQL Tuning Set

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SQL Tuning Set | Definition

SQL Tuning Set



SQL statement

Context

Statistics

Plans

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```
--Capture directly from cursor cache at regular intervals
exec DBMS_SQLSET.CAPTURE_CURSOR_CACHE ( ... );

--One time sample from cursor cache
exec DBMS_SQLSET.SELECT_CURSOR_CACHE ( ... );
```


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```
--Capture directly from cursor cache at regular intervals
exec DBMS_SQLSET.CAPTURE_CURSOR_CACHE ( ... );

--One time sample from cursor cache
exec DBMS_SQLSET.SELECT_CURSOR_CACHE ( ... );

--Capture from AWR
SQL> exec DBMS_SQLSET.SELECT_WORKLOAD_REPOSITORY ( ... );
```


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```
SQL> select name, statement_count from dba_sqlset;

NAME                           STATEMENT_COUNT
_____________________________ _________________
SALES_APP_WORKLOAD                        2343
```


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```
BEGIN
     DBMS_AUTO_TASK_ADMIN.ENABLE(
          CLIENT_NAME => 'Auto STS Capture Task',
          OPERATION => NULL,
          WINDOW_NAME => NULL);
END;
/
```


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```
SQL> select name, statement_count from dba_sqlset;

NAME                           STATEMENT_COUNT
------------------------------ ---------------
SALES_APP_WORKLOAD                        2343
SYS_AUTO_STS                              6426
```


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Automatic SQL Tuning Set

- Used for years in Autonomous AI Database
- Stores information in SYSAUX
- Advised to be on 19.25 or newer

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```
SQL> select view_name from dba_views where view_name like 'DBA%SQLSET%';

VIEW_NAME
_____________________________
DBA_SQLSET
DBA_SQLSET_REFERENCES
DBA_SQLSET_STATEMENTS
DBA_SQLSET_BINDS
DBA_SQLSET_PLANS
```


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Gather at least a full month of workload data

- Assist in testing your database
- Useful in solving post-migration performance problems

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```
-- If you have many bind variables in your queries, increase the number of binds
-- to capture from 400 (default) to 3999 (max)

alter system set "_cursor_bind_capture_area_size"=3999;
```


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Automatically recover from certain ORA-00600 errors

- Automatic Error Mitigation

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```
SQL> select ... from ...
ERROR at line 1:
ORA-00600: internal error code, arguments: [...]
```


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New In 26ai

```
SQL> select ... from ...
ERROR at line 1:
ORA-00600: internal error code, arguments: [...]

SQL> alter session set sql_error_mitigation = 'on';

SQL> select ... from ...
n rows returned
```


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Generate SQL diagnostic report

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```
DECLARE
      my_report CLOB;
BEGIN
      my_report := DBMS_SQLDIAG.REPORT_SQL(
            sql       => '6ah8zgpch6ksu',
            directory => 'DATA_PUMP_DIR',
            level     => 'ALL');
END;
/
```


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Collapse All

SQL Report SQLID: 6ah8zgpch6ksu Report Date: 11-OCT-26 05:36

Warning: SQL Not found in memory

PLANS

- Last Execution Plan
- Current Plans Summary
- Historical Plans Summary
- All Execution Plans
- Historical Execution Plans
- Plan Control Objects (Parameters)
- Plan Control Objects (Baselines/Profiles)
- Plan Control Objects (DBA SQLSET STATEMENTS)
- Monitored Executions
- Reoptimization Hints

GLOBAL

- SQL Text
- SQL History
- Parameters(Non-Default Values)
- Instance Parameters
- Observations
- DBMS STATS Table Preferences
- Historical SQL Stats - DELTA
- Historical SQL Stats - TOTAL

CURSOR SHARING AND BINDS

- Peeked vs Monitored Bind Values - In Memory
- Peeked vs Captured Bind Values - In Memory
- Peeked vs Captured Bind Values - AWR

TABLES

- Table Summary
- Table Columns
- Table Partitions
- Table Constraints
- Table Modifications
- Table Extensions
- Tables Statistics Versions
- Gather Table Stats Details

INDEXES

- Index Summary
- Index Columns
- Index Partitions
- Indexes Statistics Versions

ACTIVE SESSION HISTORY(ASH)

- ASH by Plan (in Memory)
- ASH by Plan Line (in Memory)
- ASH by Plan
- ASH by Plan Line
- Index Contention

Further Information

SQL Tuning Set

- Blog post: Oracle SQL Tuning Sets (STS) – The foundation for SQL Tuning
- Blog post: What is the automatic SQL tuning set?
- Blog post: Using the Automatic SQL Tuning Set in Oracle Database 19c
- MOS note: Automatic SQL Tuning Sets (ASTS) 19c RU 19.7 Onwards (KB119960)

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Schema level grants

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New In 26ai

```
SQL> grant select any table on schema appuser to reportuser;
```


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```
SQL> grant select any table on schema appuser to reportuser;

SQL> create table appuser.newtab1 ( .... );
```



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Changing passwords gracefully

- Gradual Password Rollover

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```
SQL> CREATE PROFILE app_profile LIMIT
       PASSWORD_ROLLOVER_TIME 1;

SQL> CREATE USER app_user
       ...
       PROFILE app_profile;
```


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DEMO

Change password
Use rollover period



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What Happened?

- Allows a user to have two passwords for a limited period
- Minimum one hour (1/24), maximum 60 days
- Identify sessions using old password in the audit trail

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```
SQL> SELECT authentication_type
     FROM   unified_audit_trail
     WHERE  action_name='LOGON' AND dbusername='APP_USER';

AUTHENTICATION_TYPE
--------------------------------------------------------------------------------
... (LOGON_INFO=((VERIFIER=12C-NEW) ... ))

... (LOGON_INFO=((VERIFIER=12C-OLD) ... ))
```


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I need to check something.
Please grant dba?
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```
SQL> grant dba to daniel;
```


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New In 26ai

~~SQL> grant dba to daniel;~~

```
SQL> grant db_developer_role to daniel;
```


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DB_DEVELOPER_ROLE

- Combines
  - `CONNECT` and `RESSOURCE`
  - Additional privileges to create additional objects
  - Execute on developer related packages

- Think about *least-privilege* principle

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```
SQL> ALTER SYSTEM SET MAX_IDLE_BLOCKER_TIME = 5;
```


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Blocking Sessions

- Time an idle session is allowed to block other sessions
- Terminates blocking session on timeout
- Also applies if `SESSIONS` or `PROCESSES` are close to their limit

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New In 26ai

```
SQL> ALTER SESSION SET TXN_PRIORITY = LOW;
```


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Transaction Priority

New In 26ai

- Three levels: High, Medium, Low
- By default, everyone goes in High
- Automatically cancels a blocking transaction
  - Optionally, you can just track the block instead of rolling back
- Customizable wait period
  - `PRIORITY_TXNS_HIGH_WAIT_TARGET`, `PRIORITY_TXNS_MEDIUM_WAIT_TARGET`

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THE REST OF THE DAY

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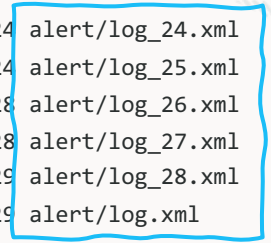


Alert log management

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New In 26ai

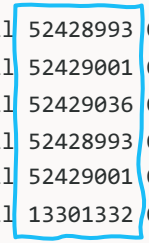
```
ls -l alert/log*
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:24 alert/log_24.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:24 alert/log_25.xml
-rw-r-----. 1 oracle oinstall 52429036 Oct 11 10:28 alert/log_26.xml
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:28 alert/log_27.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:29 alert/log_28.xml
-rw-r-----. 1 oracle oinstall 13301332 Oct 11 10:29 alert/log.xml
```



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New In 26ai

```
ls -l alert/log*
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:24 alert/log_24.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:24 alert/log_25.xml
-rw-r-----. 1 oracle oinstall 52429036 Oct 11 10:28 alert/log_26.xml
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:28 alert/log_27.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:29 alert/log_28.xml
-rw-r-----. 1 oracle oinstall 13301332 Oct 11 10:29 alert/log.xml
```



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New In 26ai

```
ls -l alert/log*
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:24 alert/log_24.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:24 alert/log_25.xml
-rw-r-----. 1 oracle oinstall 52429036 Oct 11 10:28 alert/log_26.xml
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:28 alert/log_27.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:29 alert/log_28.xml
-rw-r-----. 1 oracle oinstall 13301332 Oct 11 10:29 alert/log.xml

ls -l trace/alert*
-rw-r-----. 1 oracle oinstall 2193649 Oct 11 10:24 trace/alert_CDB26_24.log
-rw-r-----. 1 oracle oinstall 2193558 Oct 11 10:24 trace/alert_CDB26_25.log
-rw-r-----. 1 oracle oinstall 2193824 Oct 11 10:28 trace/alert_CDB26_26.log
-rw-r-----. 1 oracle oinstall 2193616 Oct 11 10:28 trace/alert_CDB26_27.log
-rw-r-----. 1 oracle oinstall 2193756 Oct 11 10:29 trace/alert_CDB26_28.log
-rw-r-----. 1 oracle oinstall  789764 Oct 11 10:29 trace/alert_CDB26.log
```


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```
ls -l alert/log*
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:24 alert/log_24.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:24 alert/log_25.xml
-rw-r-----. 1 oracle oinstall 52429036 Oct 11 10:28 alert/log_26.xml
-rw-r-----. 1 oracle oinstall 52428993 Oct 11 10:28 alert/log_27.xml
-rw-r-----. 1 oracle oinstall 52429001 Oct 11 10:29 alert/log_28.xml
-rw-r-----. 1 oracle oinstall 13301332 Oct 11 10:29 alert/log.xml
```

Smaller segments

```
ls -l trace/alert*
-rw-r-----. 1 oracle oinstall 2193649 Oct 11 10:24 trace/alert_CDB26_24.log
-rw-r-----. 1 oracle oinstall 2193558 Oct 11 10:24 trace/alert_CDB26_25.log
-rw-r-----. 1 oracle oinstall 2193824 Oct 11 10:28 trace/alert_CDB26_26.log
-rw-r-----. 1 oracle oinstall 2193616 Oct 11 10:28 trace/alert_CDB26_27.log
-rw-r-----. 1 oracle oinstall 2193756 Oct 11 10:29 trace/alert_CDB26_28.log
-rw-r-----. 1 oracle oinstall  789764 Oct 11 10:29 trace/alert_CDB26.log
```


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Alert Log Management

New In 26ai

- The segment size is fixed
- The database keeps 1000M of XML alert log
- Text alert log retention based on XML alert log

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New In 26ai

```
SQL> ALTER SYSTEM SET ALERT_LOG_MAX_SIZE = 2500M
```


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```
SQL> ALTER SYSTEM SET ALERT_LOG_MAX_SIZE = 2500M
     COMMENT="20261011: Set to corporate standard";
```


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New In 26ai

```
$ cat trace/attention_CDB26.log
```

```
{
  "ERROR"        : "USER (ospid: 15262_15279): terminating the instance due to ORA error 472",
  "URGENCY"      : "IMMEDIATE",
  "INFO"         : "Additional Information Not Available",
  "CAUSE"        : "The specified error is deemed fatal by the Oracle instance and all instance
                    processes have been terminated and the shared memory has been removed.",
  "ACTION"       : "Investigate the additional information recorded in the alert log. Rectify any
                    system, configuration or environment related issues. In RAC configuration,
                    CRS will restart the instance, else manually re-establish ...",
  "CLASS"        : "ORACLE INSTANCE / CDB ADMINISTRATOR / AL-1003",
  "TIME"         : "2026-09-29T08:59:43.163+00:00"
},
```


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Reclaiming space

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New In 26ai

```
SQL> exec dbms_space.shrink_tablespace('USERS');
```


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Tablespace Shrink

New In 26ai

- Works online or offline
- Keeps indexes usable, if possible
- Pay attention to cursor invalidation

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A few more from the goodie bag

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New In 26ai

```
SQL> ALTER SYSTEM SET DB_FLASHBACK_LOG_DEST_SIZE=50G;

SQL> ALTER SYSTEM SET DB_FLASHBACK_LOG_DEST='/u02/flashback';
```


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New In 26ai

```
SQL> ALTER SESSION SET SQL_HISTORY_ENABLED = TRUE;

SQL> SELECT * FROM V$SQL_HISTORY;
```


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New In 26ai

```
*
ERROR at line 1:
ORA-04068: existing state of packages has been discarded
ORA-04061: existing state of package body "APPUSER.MYPKG1" has been invalidated
ORA-04065: not executed, altered or dropped package body "APPUSER.MYPKG1"
Help: https://docs.oracle.com/error-help/db/ora-04068/
```


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New In 26ai

```
SQL> CREATE OR REPLACE PACKAGE APPUSER.MYPKG1 RESETTABLE AS ... ;

SQL> CREATE OR REPLACE PACKAGE BODY APPUSER.MYPKG1 RESETTABLE AS ... ;
```


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New In 26ai

```
SQL> select waiting_session, event, dp_state_in_wait
     from   v$datapump_sessionwait_info;

WAITING_SESSION EVENT                                      DP_STATE_IN_WAIT
--------------- ------------------------------------------ ----------------
10              direct path sync                           WAITING
77              log buffer space                           WAITING
191             log buffer space                           WAITING
428             enq: TT - contention                       WAITING
```


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New In 26ai

```
SQL> drop table t1;

ERROR at line 1:
ORA-00942: table or view does not exist
```


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New In 26ai

```
SQL> drop table t1;

ERROR at line 1:
ORA-00942: table or view does not exist
```

```
SQL> drop table if exists t1 ... ;

Table dropped
```


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```
SQL> create table t1 ( ... );

ERROR at line 1:
ORA-00955: name is already used by an existing object
```


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New In 26ai

```
SQL> create table t1 ( ... );

ERROR at line 1:
ORA-00955: name is already used by an existing object
```

```
SQL> create table if not exists t1 (c1 number);

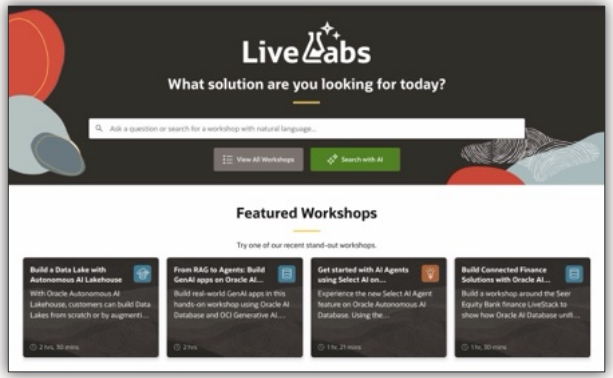
Table created
```


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DON'T TEST IN PRODUCTION

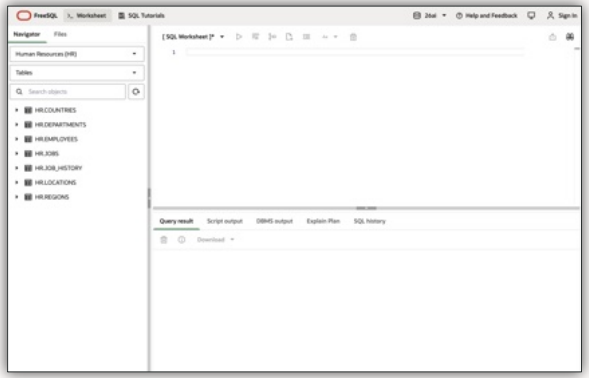
Photo by Dave Hoefler on Unsplash



LiveLabs

- Guided exercises
- Nothing to install
- Runs in browser
- 100 % free

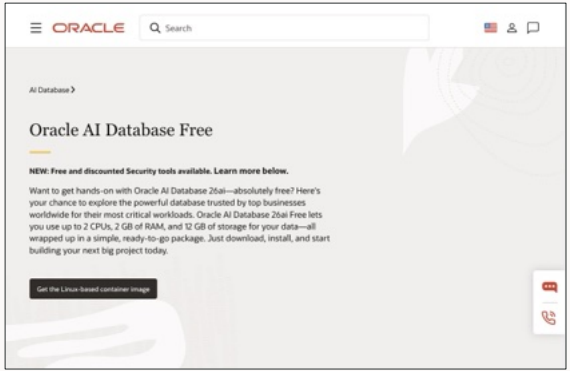
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FreeSQL

- Explore SQL
- Tutorials
- Experiment
- 100 % free

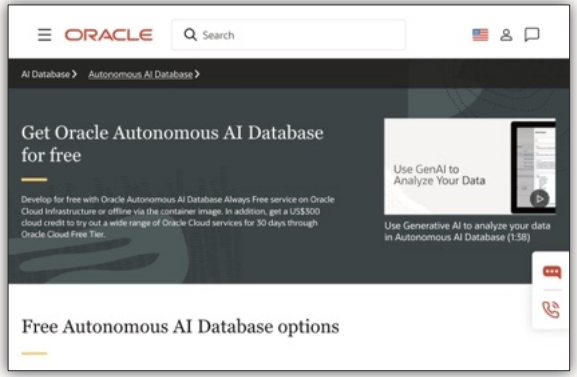
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Oracle AI Database Free

- Complete database
- Explore
- Build
- 100 % free

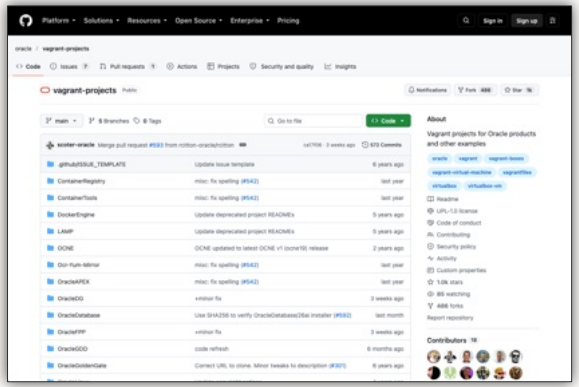
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Always Free Autonomous AI Database

- Fully managed database
- Explore and build
- Cloud or container
- 100 % free

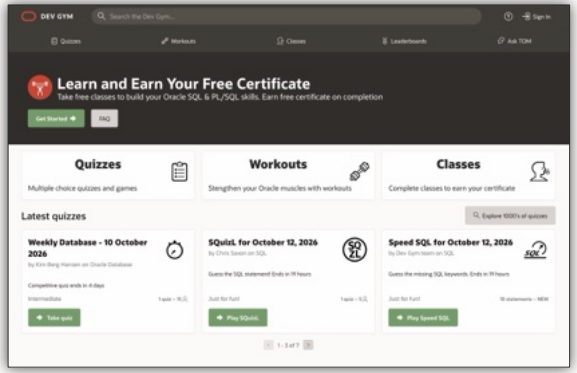
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VMs and containers

- Container or full VM
- Preconfigured
- Repeatable local labs
- 100 % free

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Dev Gym

- Sharpen skill
- Quizzes and workouts
- Guided classes
- 100 % free

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You won't become an expert by listening to me

You become an expert by trying yourself

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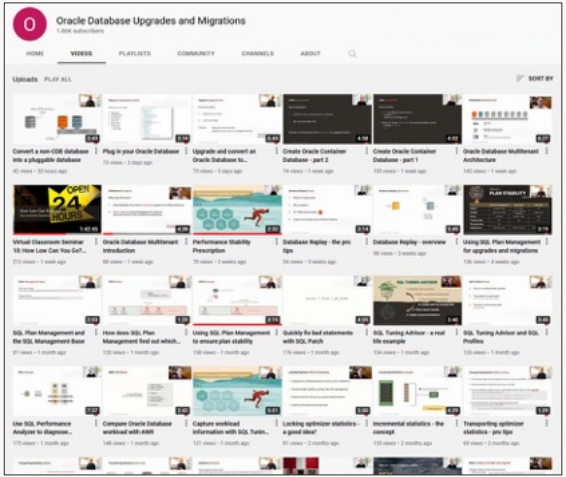
Oracle

DBAs

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- 300+ videos
- New videos every week
- No marketing
- No buzzword
- All tech

SCAN ME

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ORACLE