

Database Vault

Learn By Example

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What is it?

Database vault was built to protect the organization from inside threats, control super users and administrative users, enable a separation of duties, comply to regulations (SoX etc).

Database Vault Main Usage

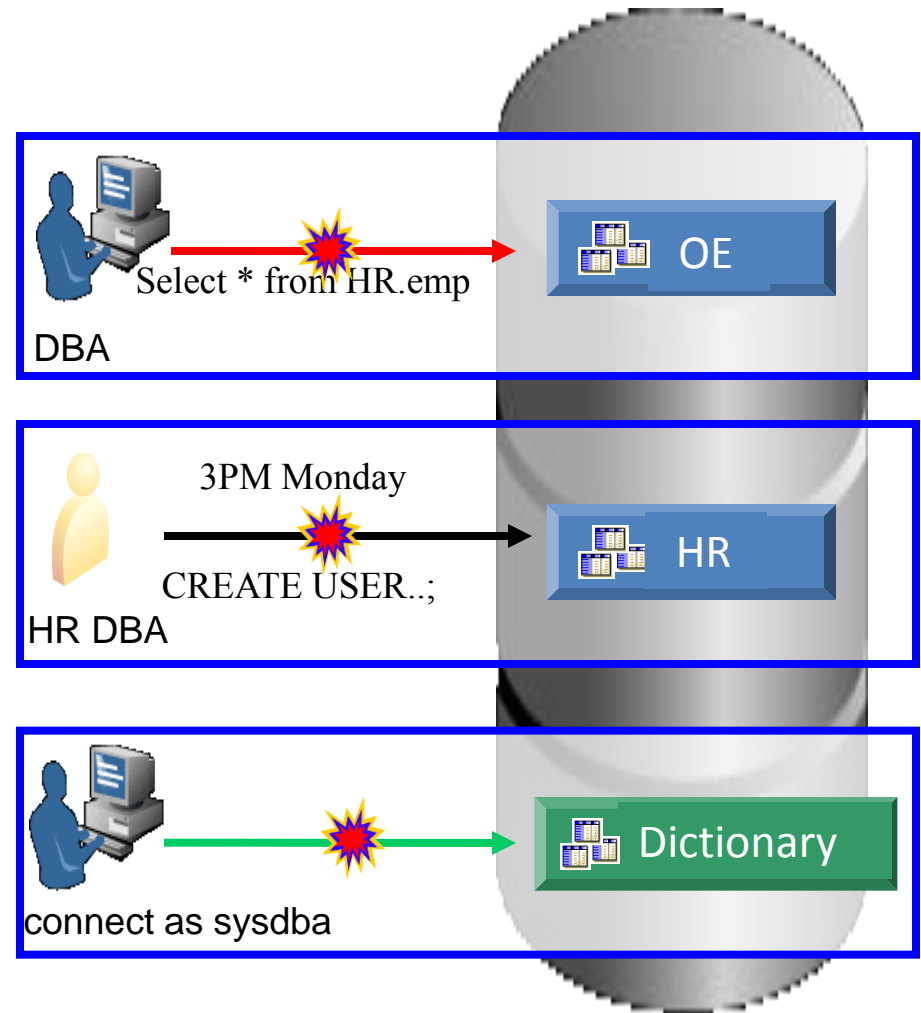
- Protect application data from privileged users
- Control access to applications
- Protect against database changes

What Database Vault Does

- Database Vault **Realms and Command Rules** enable customers to easily restrict access to applications from the DBA and other powerful users
- Database Vault provides **Separation of Duty** to help customers meet regulatory compliance requirements
- Database Vault **Multi-Factor Authorization** significantly increases security

Data Vault Solution

- DBA looks at HR data
 - Enforce Separation of Duty
- HR DBA Creates User
 - Stop (Accidental) misuse of privileges
- SYS connects as SYSDBA for daily tasks
 - Enforce principle of least privilege



Installation

- Starting from 9.2.0.8, 10.2.0.3
- Version 9i / 10g installation is separate from the DB.
- Version 11g and above – built in database feature.
- There are several pre-requisites to consider

Installation – pre-requisites

- Oracle label security must be installed and enabled.
- Database control must be installed.
- ASM & DB should be installed on separate homes.
- Check note – **Doc ID 793739.1** for more details

DEMO

Oracle DV – Supplied Packages

- **DVSYS.DBMS_MACADM** - Configure Realms, Rules Sets, Command Roles and more.
- **DVSYS.DBMS_MACSEC_ROLES** – Setting Secure application roles
- **DVSYS.DBMS_MACUTL** – Contains pre-defined constants to use along side DVSYS.DBMS_MACADM.

DVSYSD.BMS_MACADM

Create Realm :

```
BEGIN
DVSYSD.BMS_MACADM.CREATE_REALM(
  realm_name => 'Performance Statistics Realm',
  description => 'Realm to measure performance',
  enabled => DBMS_MACUTL.G_YES,
  audit_options =>
  DBMS_MACUTL.G_REALM_AUDIT_FAIL);
END;
/
```

Removing Database Vault – 10g

Shutdown Oracle instance:

```
$ cd $ORACLE_HOME/rdbms/lib  
$ make -f ins_rdbms.mk dv_off  
$ cd $ORACLE_HOME/bin  
$ relink oracle
```

Startup Oracle database:

```
$ dvca -action disable -service TARDA1 -sys_passwd test -  
owner_account -owner_passwd test123#_ -logfile ./dvca.log -  
nodecrypt -silent
```

Removing Database Vault – 11g DOAG

Shutdown Oracle instance:

```
cd $ORACLE_HOME/rdbms/lib  
make -f ins_rdbms.mk dv_off ioracle
```

Startup Oracle instance:

```
conn / as sysdba  
alter trigger dvsys.dv_before_ddl_trg disable;  
alter trigger dvsys.dv_after_ddl_trg disable;  
alter system set recyclebin=off scope=spfile;
```

Restart Oracle instance:

```
cd $ORACLE_HOME/rdbms/lib  
make -f ins_rdbms.mk dv_off ioracle
```

References

- **What to Check for a Successful Database Vault Installation in 10gR2 (Doc ID 793739.1)**
- **Uninstall Or Reinstall Database Vault in 11g (Doc ID 803948.1)**
- **How To Reconfigure Database Vault in 10g (Doc ID 744390.1)**
- **Master Note For Oracle Database Vault (Doc ID 1195205.1)**