19c ORACLE Database

Oracle Database Vault

Oracle Database Vault provides powerful security controls to protect sensitive data from unauthorized access, and implement separation of duties between database administrators and data owners to comply with privacy and regulatory requirements. Controls can be deployed to block privileged account access to application data and control sensitive operations inside the database using an authorized trusted path. Oracle Database Vault secures existing database environments transparently, eliminating costly and time-consuming application changes.

CONTROLS FOR PRIVILEGED ACCOUNTS

Compromised privileged database accounts are one of the most commonly used pathways for gaining access to sensitive data. While their broad and unrestricted access facilitates database maintenance, the same privileged account also creates a point of attack for gaining inappropriate access to large amounts of data. Oracle Database Vault Realms defined around application schemas, tables and stored procedures provide controls to prevent privileged accounts from being exploited by malicious users to access sensitive data. Various out-of-the-box factors such as IP address, authentication method, and program name help implement trusted path authorization to deter attacks leveraging stolen passwords.

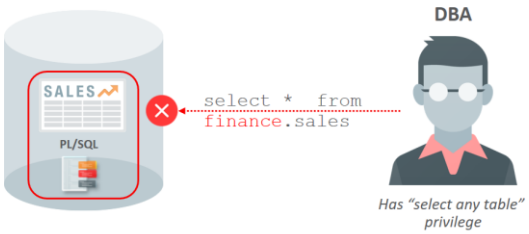

Figure 1: Oracle Database Vault Realms block access from privileged accounts

Key Business Benefits

- Protects sensitive data and provides an easy, cost-efficient route for compliance with internal controls, segregation of duties, and access control provisions of GDPR, PCI-DSS, HIPAA, SOX, and other regulations.
- Helps manage business risk of data breaches due to sensitive data exposure.
- Implement preventive controls to block privileged users and DBAs from accessing sensitive data.
- Enforce operational controls inside the database to lock down the configuration from potential threats and prevent audit findings.
- Save time and secure environments with application-specific protection policies for enterprise applications including Fusion Applications, E-Business Suite, PeopleSoft, Siebel, and SAP.

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CONTROLS FOR DATABASE CONFIGURATION

Among the most common audit findings are unauthorized changes to database entitlements, including grants of the DBA role, as well as new accounts and database objects. Preventing unauthorized changes to production environments is important not only for security, but also for compliance as these changes can weaken security and open doors to hackers, violating privacy and compliance regulations. Oracle Database Vault Command Rules allow customers to control operations inside the database, including commands such as alter database, alter system, truncate table, and create user. These controls prevent unauthorized configuration changes and also prevent hackers and malicious insiders from tampering with and making application changes.

SEPARATION OF DUTY

Oracle Database Vault provides three distinct separation of duty controls out-of-the-box for security administration, account management, and day-to-day database administration activities. Oracle Database Vault separation of duty controls can be customized and organizations with limited resources can assign multiple Oracle Database Vault responsibilities to the same administrator.

ENTERPRISE APPLICATIONS PROTECTION POLICIES

Application-specific Oracle Database Vault protection policies and guidelines are available for major enterprise applications including Oracle Fusion Applications, Oracle E-Business Suit, Oracle PeopleSoft, Oracle Siebel, Oracle Financial Services (i-Flex), Oracle Primavera, SAP, and Finacle from Infosys.

Customer applications can be swiftly validated with Database Vault security controls using simulation mode. Simulation mode captures security violations instead of blocking them, allowing a single regression test to capture the required security changes without blocking legitimate production activity. Simulation mode allows customers to quickly deploy new security controls into production without compromising operations.

OPERATIONS CONTROL

Database consolidation on Oracle Multitenant benefits from increased security with Database Vault operations control. Apart from using PDB lockdown profiles that prevent PDB users from impacting other PDBs and the database, Oracle Database Vault Operations Control transparently prevents Multitenant container administrators from accessing application sensitive data in pluggable databases.

MANAGEABILITY

Oracle Database Vault is built into all currently supported database versions and can be enabled easily. Oracle Database Vault administration is fully integrated with Oracle Enterprise Manager Cloud Control, providing Security Administrators with a streamlined and centralized interface to manage Oracle Database Vault. Security responsibility can be delegated to domain security experts.

Key Features

- Prevent against privilege misuse and access to sensitive data, even from users with direct object grants, including the object owner, with Oracle Database Vault **realms**.
- Prevent unauthorized changes and human error on production environments using Oracle Database Vault **command rules** and **factors**.
- Protect against the use of stolen credentials by defining a **trusted path** between apps/clients and Database.
- Prevent infrastructure DBAs / Multitenant container administrators from accessing pluggable databases sensitive data using Oracle Database Vault **operations control**.
- Quickly verify security controls using simulation mode to test custom and packaged applications.

Related Products

Oracle Database 19c Defense-In-Depth Security Solutions:

- Oracle Advanced Security
- Oracle Key Vault
- Oracle Data Masking and Subsetting Pack
- Oracle Label Security
- Oracle Audit Vault and Database Firewall
- Oracle Database Security Assessment Tool

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