

Oracle Advanced Security

What security features does Advanced Security (OAS) offer?

- Data Encryption
- Strong Authentication

Several different encryption algorithms and authentication methods are supported.

What is transparent data encryption?

- Encrypts individual table columns or entire application tablespaces
- Uses encryption keys and master encryption keys
- The master encryption key is stored outside the database in a wallet.
- Dedicated SYSKM role for key management operations.

What is data redaction?

- Stored data remains unaltered
- Data gets transformed and redacted on-the-fly when it leaves the database (on display)
- Redaction supports
 - ~ Redact all data in specific columns
(e.g. redact all but the last 4 digits of the account no)
 - ~ Preserve certain pieces of the data
 - ~ Randomly generate replacement data

e.g.:

Data stored	Data displayed
10/09/1992	01/01/2001
987-65-4328	XX-XX-4328
first.last@example.com	[hidden]@example.com
410141014101	550000000004

What standard security features does Oracle have?

Authentication

Database passwords are stored in encrypted form
Oracle supports host-based authentication

Profiles

Allow restriction of resource usage
Enforce password complexity rules, live times and idle times

Privileges

By default new users don't have any privileges
System, role and object privileges

Roles

What levels of auditing does Oracle have?

Statement-level auditing

Privilege-level auditing

Object-level auditing

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