

# ORACLE ADVANCED SECURITY

## ENCRYPTION FOR ORACLE E-BUSINESS SUITE

### KEY FEATURES AND BENEFITS

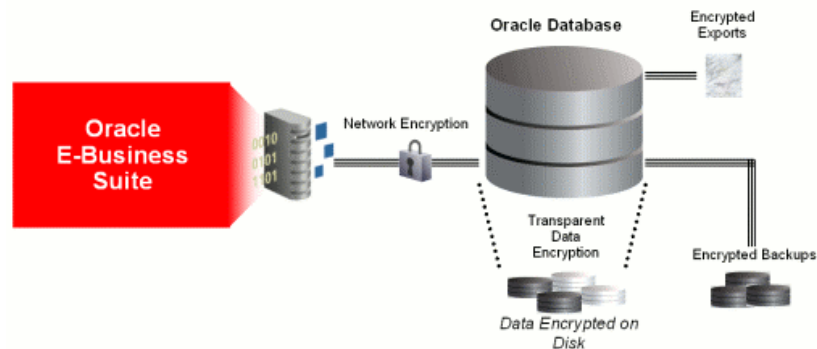
**ORACLE**  
DATABASE **11g**

- Transparent, no application changes
- Built-in key management
- Comprehensive encryption - database files, redo logs, exports or backups and network communication
- High performance
- Support for centralized key management using 3<sup>rd</sup> party hardware security modules (HSM)
- Based on open standards with support for AES, 3DES, and PKCS#11

*Industry directives such as the Payment Card Industry Data Security Standard (PCI-DSS) and numerous privacy breach notification laws require the use of encryption for sensitive data. Oracle Advanced Security provides a transparent and scalable encryption solution for encrypting sensitive Oracle E-Business Suite application data in the database, on the network, and on backup media. As the definition of sensitive data continues to expand far beyond credit card and social security numbers, Oracle Advanced Security provides the flexibility to encrypt individual columns or entire application tables.*

### Oracle Advanced Security Encryption

Oracle Advanced Security is Oracle's comprehensive data encryption solution that protects data in the database, on backup media, and on the network. Without requiring any application changes, Oracle Advanced Security seamlessly encrypts sensitive application data.



Oracle Advanced Security transparent data encryption (TDE) automatically encrypts Oracle E-Business Suite application data when written to database files and transparently decrypts the data when accessed inside the database. Traditional access controls still apply, so data will not be decrypted until an application or database user has authenticated to the Oracle database and passed all access control checks including those enforced by Database Vault, Label Security and virtual private database. Once encrypted, sensitive data remains secure in the event of unauthorized access to files at the operating system level, discarded disk drives and off-site backup media.

### Out-of-the-Box Protection For Sensitive Oracle E-Business Applications Data

Oracle has certified Oracle Advanced Security TDE column and tablespace encryption for Oracle E-Business Suite applications. TDE column encryption can be used to protect individual columns in application tables containing credit card

**RELATED PRODUCTS AND SERVICES**

- Oracle Database Vault
  - Protect application data from privileged users
  - Customizable separation-of-duty
  - Real time preventive controls
  - Out-of-the-box policies available for Oracle E-Business Suite, Siebel, PeopleSoft and JD Edwards EnterpriseOne Applications
  
- Oracle Audit Vault
  - Secure and consolidate audit data from Oracle Database 9i, Oracle Database 10g, Oracle Database 11g, Microsoft SQL Server 2000 and 2005, Sybase ASE 12.5-15.0, and IBM DB2 8.2-9.5 databases
  - Built-in reports for compliance and privileged user activity
  - Alert on suspicious activity
  - Central management of audit policies for Oracle databases
  
- Oracle Label Security
  - Transparent row level access controls using data labels
  - Multi-level security for government and defense organizations
  - Flexible, policy based architecture for commercial organizations
  
- Oracle Secure Backup
  - Transparent backup and encryption of database and operating system files to tape
  - Built-in key management
  - Based on open standards AES, 3DES
  
- Oracle Data Masking
  - De-identify privacy related application data for non-production environments
  - Automate the masking process with policies and format templates
  - Maintain referential and relational integrity to ensure applications work
  - Sensitive data never leaves the database

numbers or other personally identifiable information (PII). Encryption of credit card numbers stored in Oracle E-Business Suite applications helps organizations comply with section 3.6 of the PCI Data Security Standard (PCI-DSS). Customers running on Oracle Database 11g can use TDE tablespace encryption to protect entire application tablespaces.

**Network Encryption**

Oracle Advanced Security network encryption transparently encrypts all SQL\*Net traffic between the Oracle E-Business Suite and the database. Oracle Advanced Security supports both industry standard Secure Sockets Layer (SSL) encryption and an Oracle native encryption capability for customers that do not want to deploy X509 Public Key Infrastructure (PKI) certificates.

**Integrated with Export, Backup and Compression**

Oracle Advanced Security is integrated with Oracle DataPump and Oracle RMAN to provide seamless encryption for database exports and backups to disk, providing protection for data exported from the database or transported off-site. Additionally, Oracle Advanced Security tablespace encryption works seamlessly with Oracle Advanced compression, enabling Oracle Database 11g customers to encrypt after compression - providing both protection and storage savings.

**Certification Matrix**

Oracle Database	Oracle E-Business Suite
10.2.0.4 (TDE column encryption only)	11.5.9
11.1.0.7 (TDE column and tablespace encryption)	11.5.10

Oracle Database 11g Advanced Security supports hardware security modules for centralized key management and high assurance.

**Contact Us**

For more information about Oracle Advanced Security, please visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



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