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Security





Auditing & Monitoring Oracle Databases

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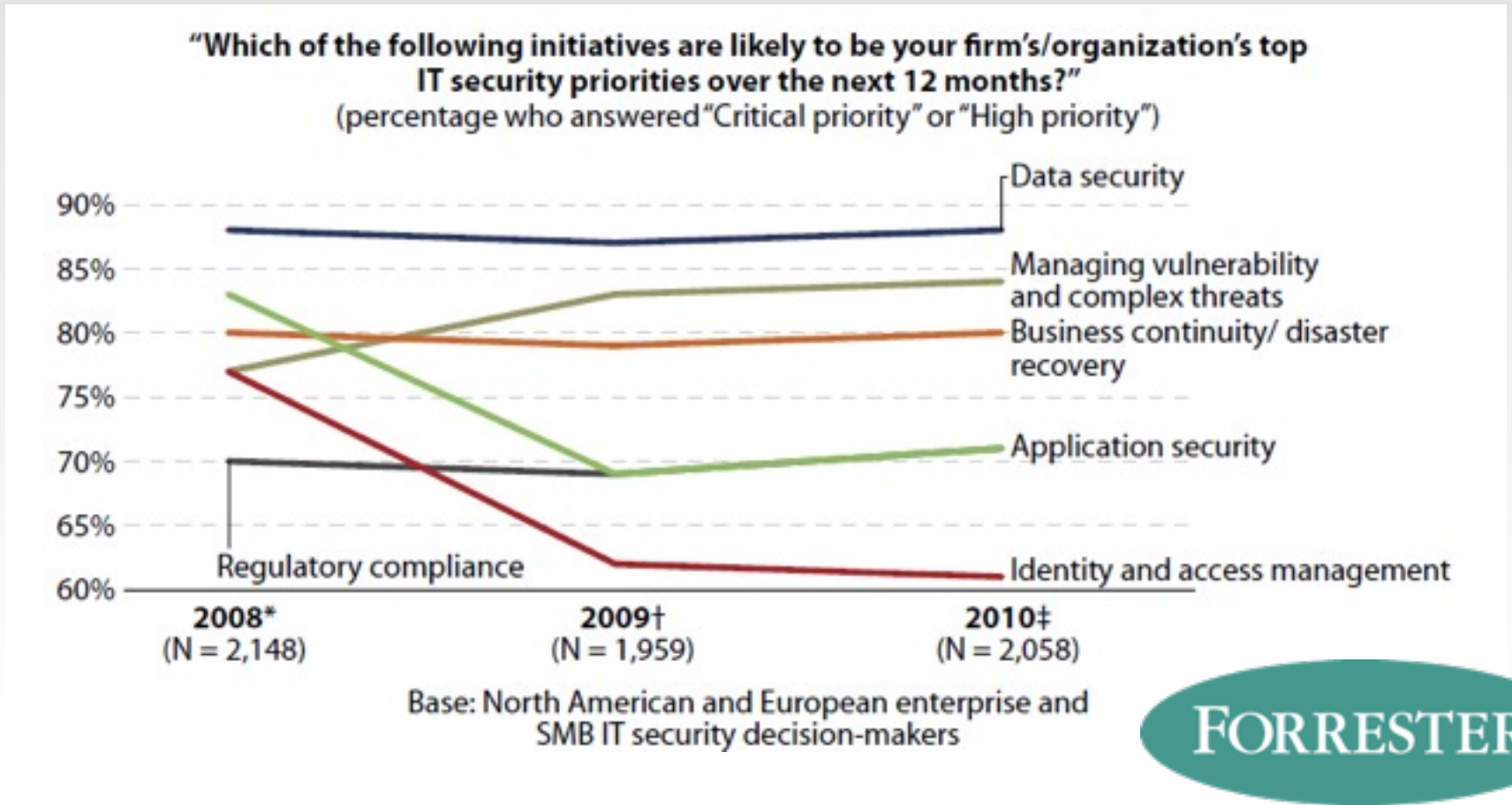
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IT Security \$35B Market Today – Data Security Top Priority



Source: Forrsights: The Evolution Of IT Security, 2010 To 2011, April 2011

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Over 900M Breached Records Resulted from Compromised Database Servers

Type	Category	% Breaches	% Records
Database Server	Servers & Applications	25%	92%
Desktop Computer	End-User Devices	21%	1%

How were these records breached?

89% using SQL injection

86% using stolen credentials

By exploiting legitimate access to databases!

IT Security Not Addressing Database Security – Only 20% Have a Plan



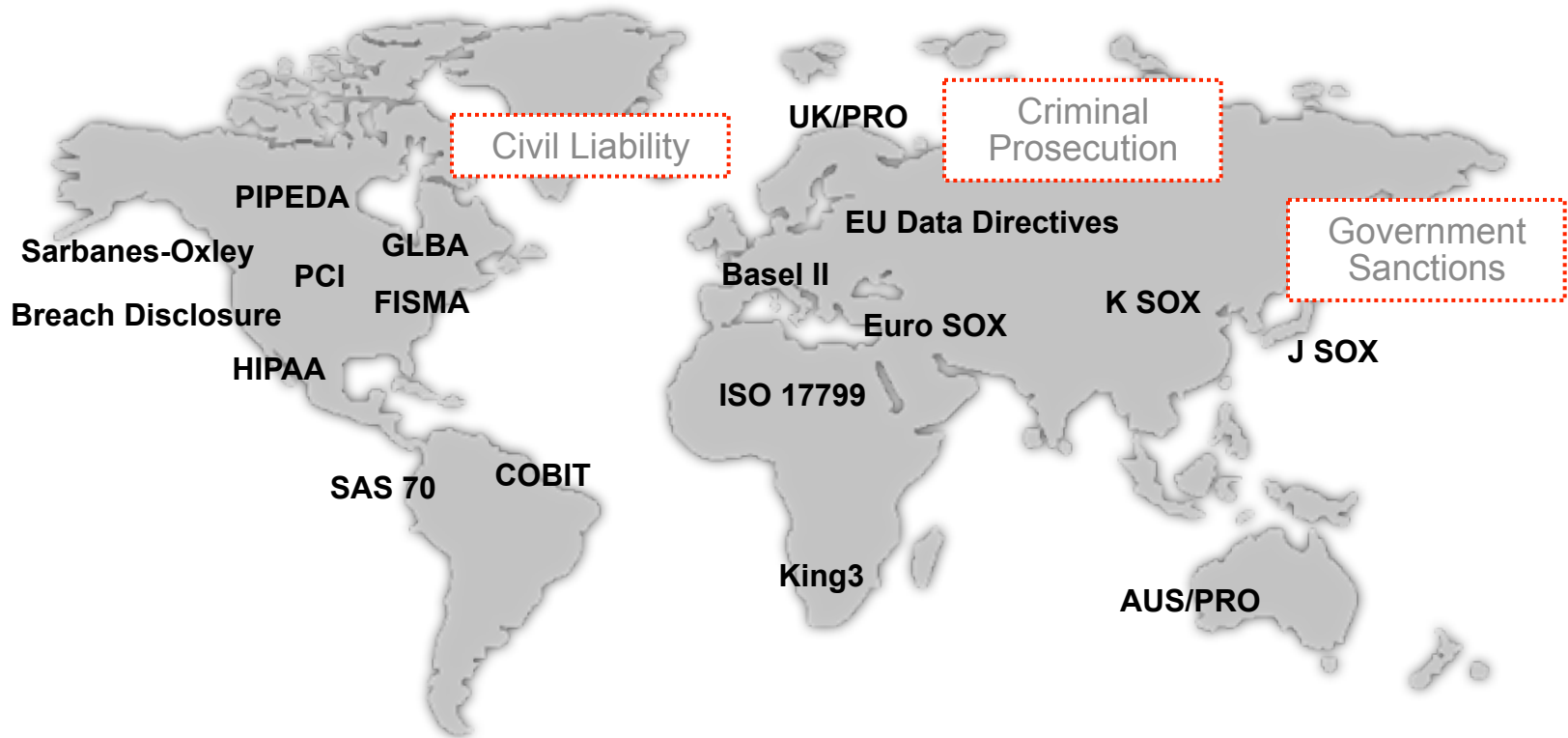
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Databases hold the crown jewels for organizations but often don't get the strong focus they need when it comes to data security planning. **Forrester estimates that although 70% of enterprises have an information security plan, only 20% of enterprises have a database security plan.**

Source: Creating An Enterprise Database Security Plan , July 2010

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More Regulations Than Ever...



90% Companies behind in compliance

Source: IT Policy Compliance Group, 2009.

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Why Auditing & Monitoring a DB environment

76%	Cannot prevent DBAs from accessing application data or tampering with application stored procedures in the database
75%	Cannot prevent application by-pass (direct database access)
72%	Do not monitor sensitive data reads
72%	System users can read/tamper data stored in database files or storage
70%	Have little to no ability to detect unauthorized database changes
66%	Vulnerable to SQL injection attacks or don't know;
48%	Have sensitive production data in non-production environments accessible by developers, testers, etc.

Source: 2010 Independent Oracle User Group Data Security Report

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Database Security Defense In Depth

Oracle Database Security Solutions

- Monitor and block threats before they reach databases
- Track changes and audit database activity
- Control access to data within the database
- Prevent access by non database users
- Remove sensitive data from non production environments



Monitoring & Blocking

- Database Firewall



Auditing

- Audit Vault
- Total Recall
- Configuration Management



Access Control

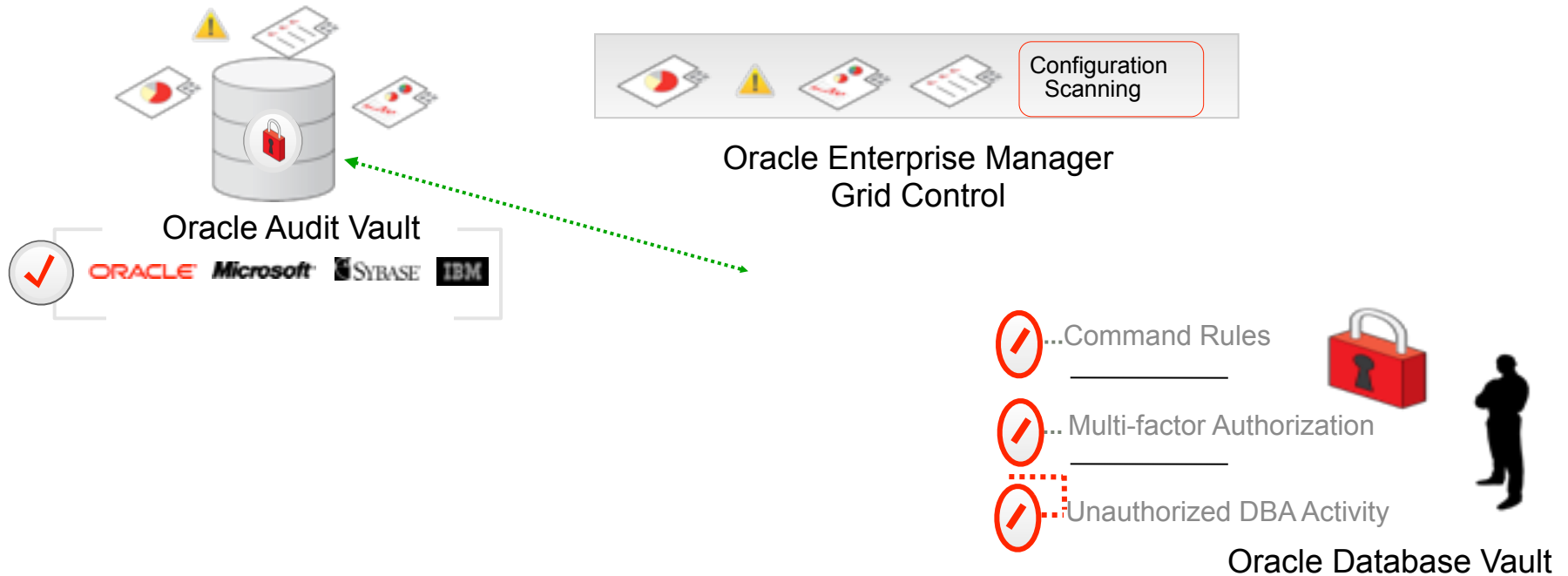
- Database Vault
- Label Security
- Identity Management



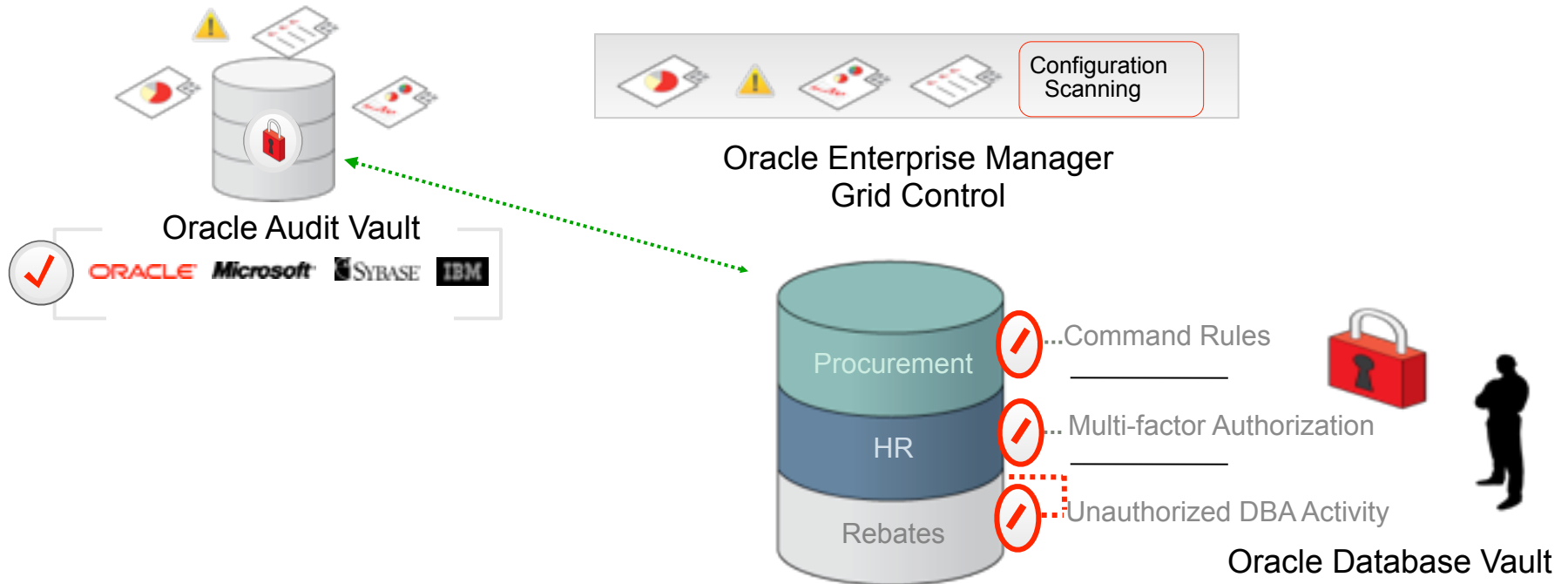
Encryption & Masking

- Advanced Security
- Secure Backup
- Data Masking

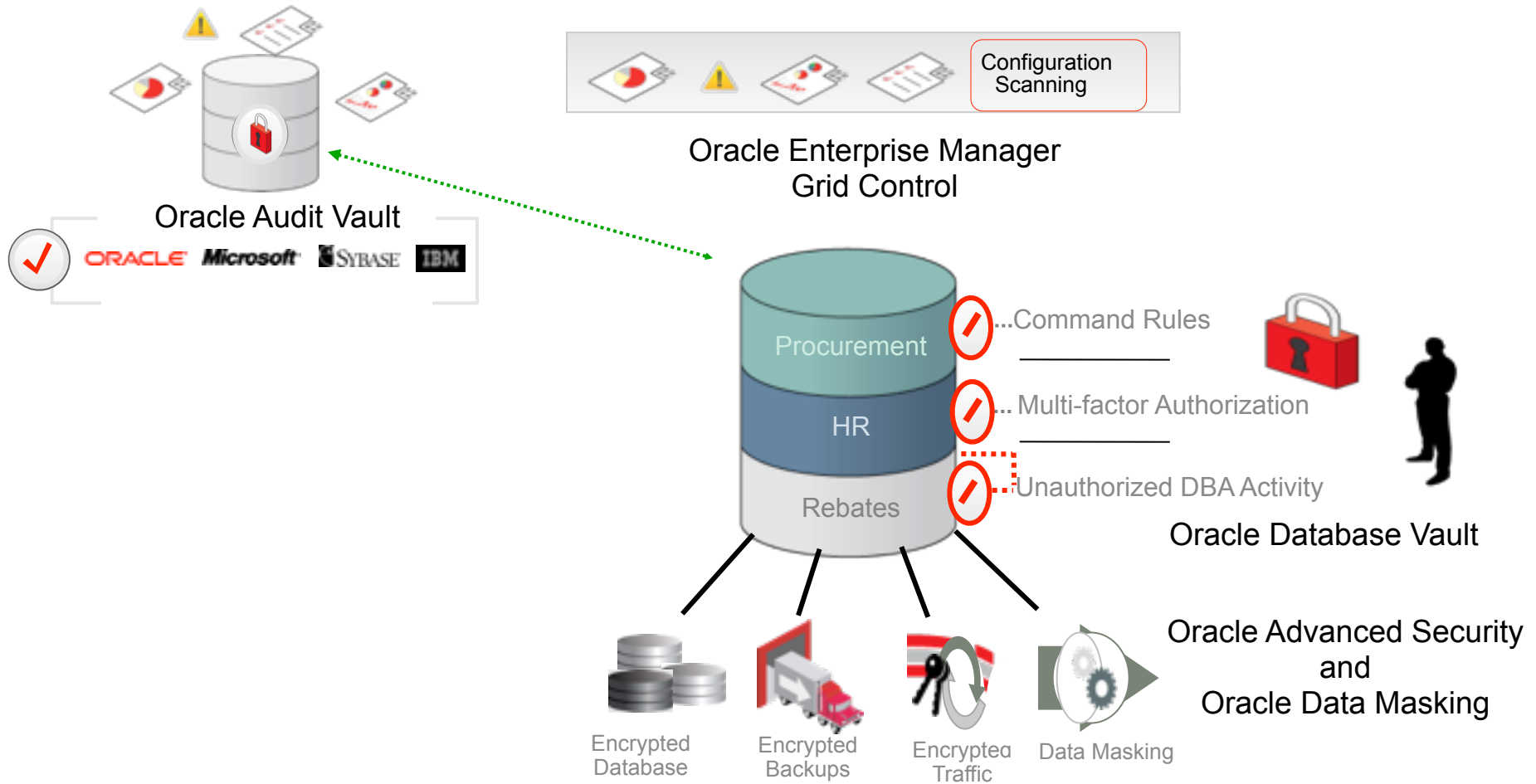
Oracle Database Security: Big Picture



Oracle Database Security: Big Picture

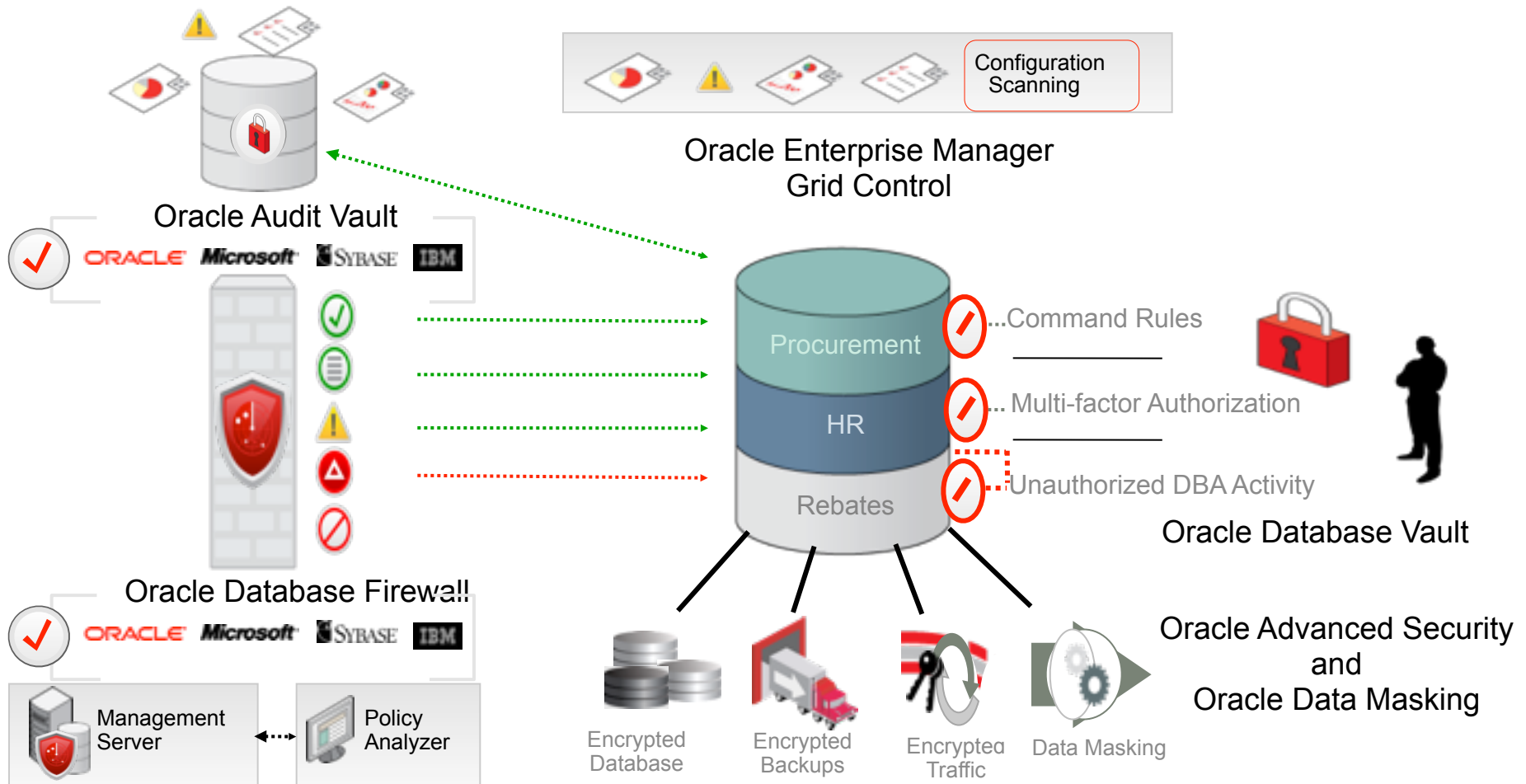


Oracle Database Security: Big Picture



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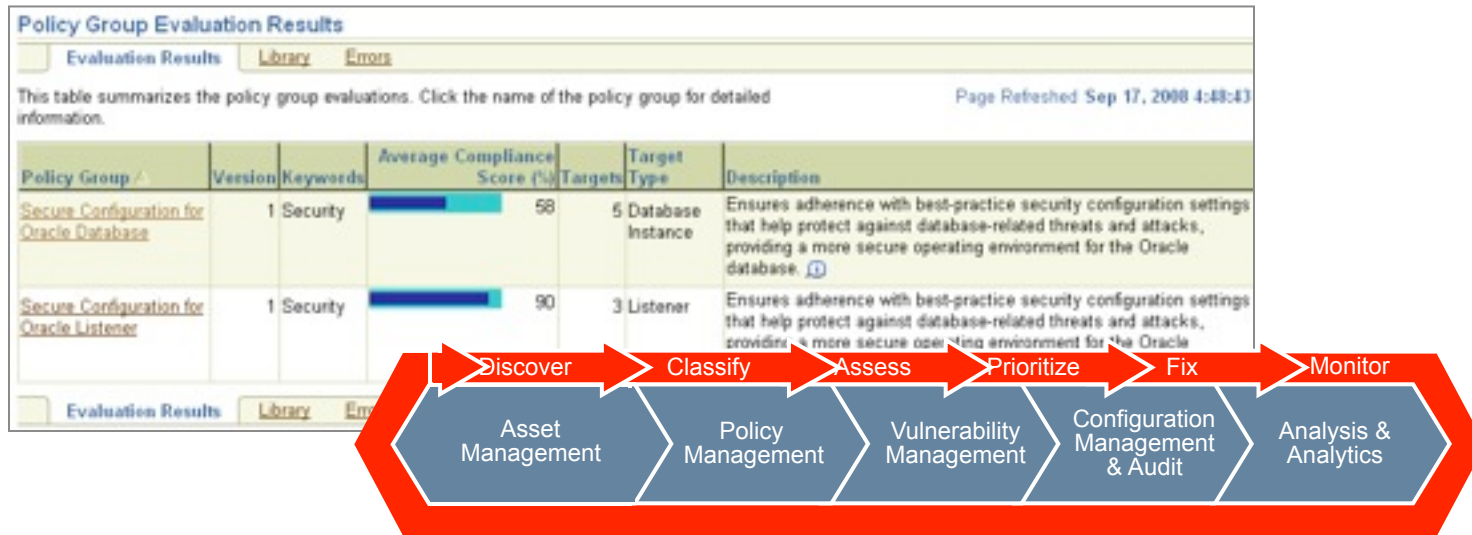
Oracle Database Security: Big Picture



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Oracle Configuration Management

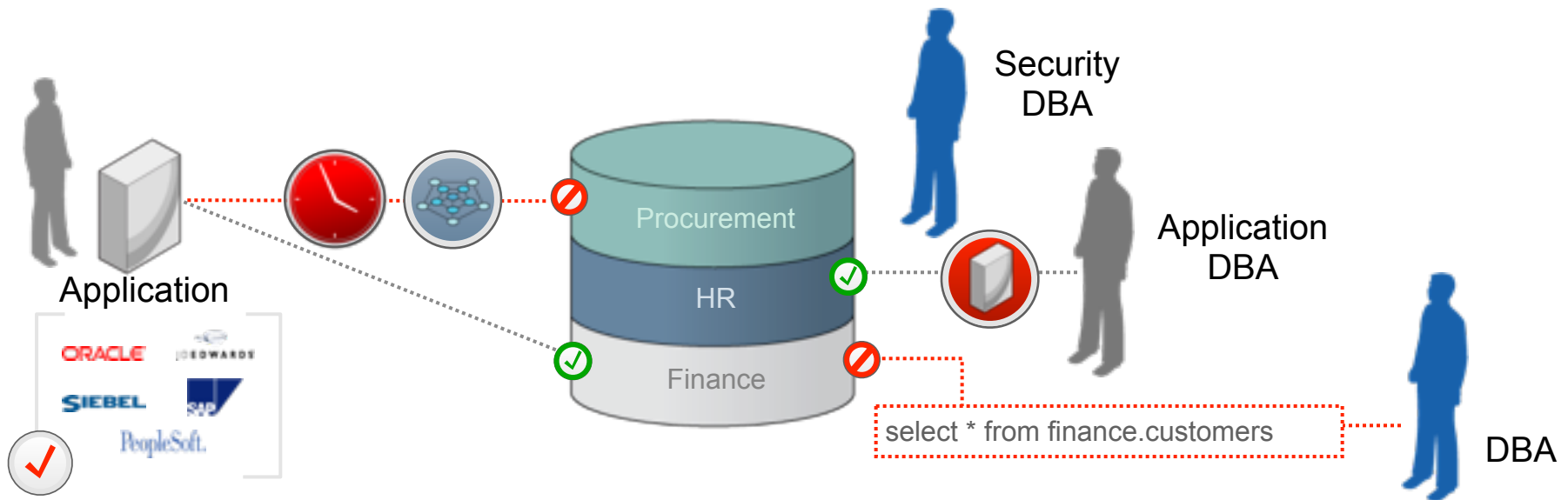
Secure Your Database Environment



- Discover and classify databases into policy groups
- Scan databases against 400+ best practices and industry standards, custom enterprise-specific configuration policies
- Detect and event prevent unauthorized database configuration changes
- Change management dashboards and compliance reports

Oracle Database Vault

Enforce Security Policies Inside the Database

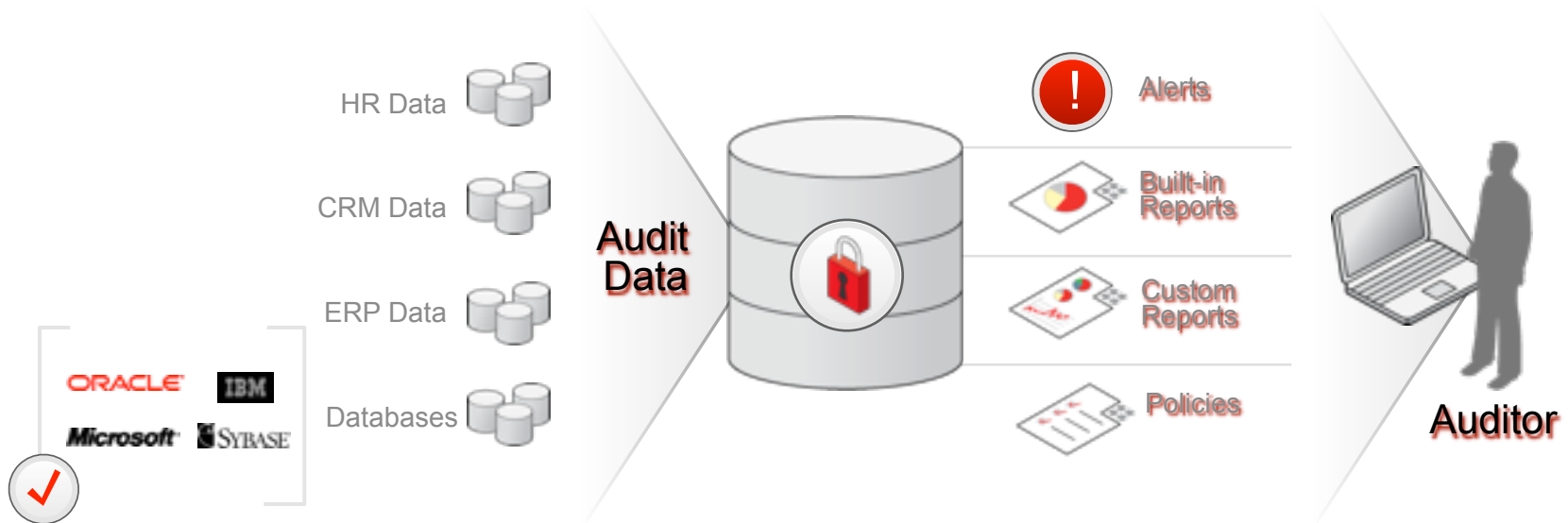


- Automatic and customizable DBA separation of duties and protective realms
- Enforce who, where, when, and how using rules and factors
 - Enforce least privilege for privileged database users
 - Prevent application by-pass and enforce enterprise data governance
- Securely consolidate application data or enable multi-tenant data management

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Oracle Audit Vault

Audit Database Activity in Real-Time

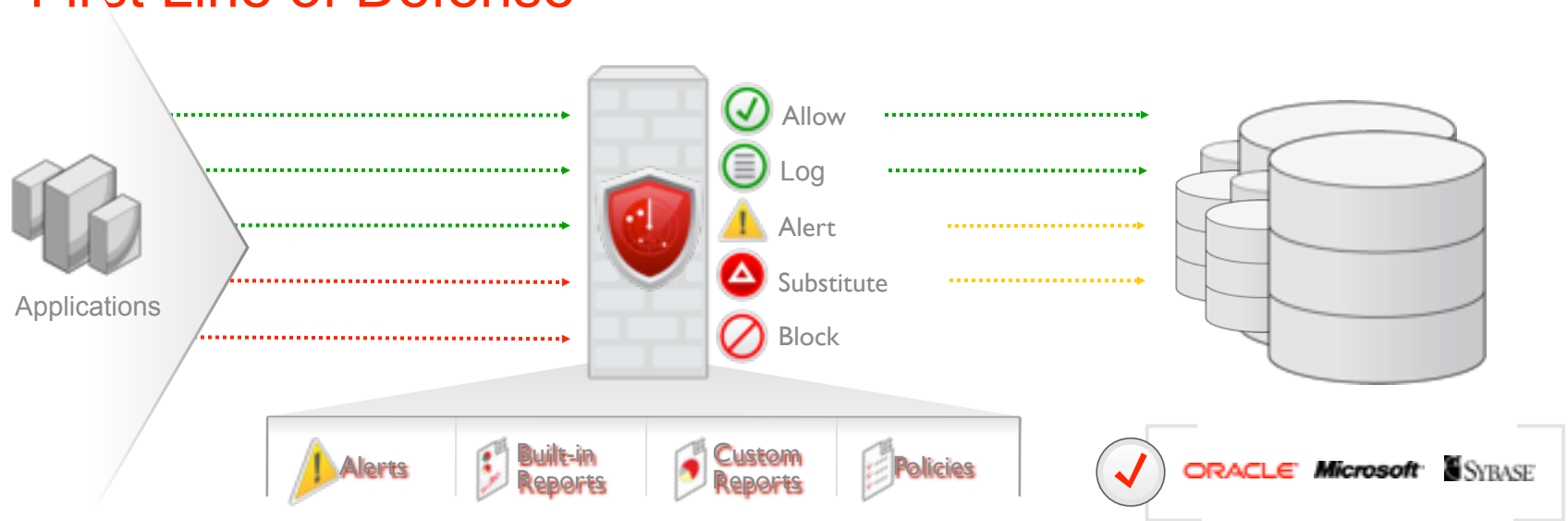


- Consolidate database audit trail into secure centralized repository
- Detect and alert on suspicious activities, including privileged users
- Out-of-the box compliance reports for SOX, PCI, and other regulations
 - E.g., privileged user audit, entitlements, failed logins, regulated data changes
- Streamline audits with report generation, notification, attestation, archiving, etc.

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Oracle Database Firewall

First Line of Defense

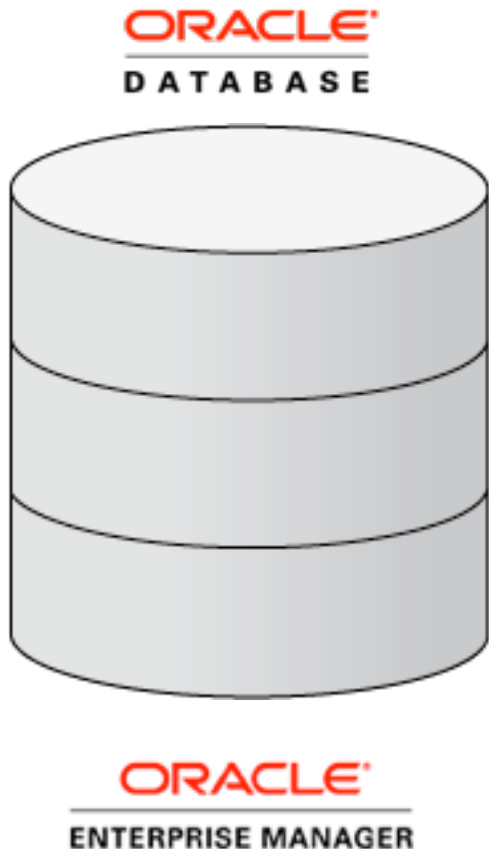


- Monitor database activity to prevent unauthorized database access, SQL injections, privilege or role escalation, illegal access to sensitive data, etc.
- Highly accurate SQL grammar based analysis without costly false positives
- Flexible SQL level enforcement options based on white lists and black lists
- Scalable architecture provides enterprise performance in all deployment modes
- Built-in and custom compliance reports for SOX, PCI, and other regulations

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Oracle Database Defense In Depth

Complete. Transparent. Proven and Cost-Effective.



Oracle Database Firewall

Oracle Advanced Security

Oracle Database Vault

Oracle Label Security

Oracle Total Recall

Oracle Audit Vault

Oracle Configuration Management

Oracle Data Masking



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