**ORACLE ENTITLEMENTS SERVER**

*Oracle Entitlements Server (OES)* is a standards-based, policy-driven security solution that provides real-time fine-grained authorization in Application, Service-Oriented Architecture (SOA) and Database environments.

**Introduction**

OES fills the need for granular, flexible, and externalized access control. The solution provides a comprehensive and centralized approach for managing access policies with distributed or centralized enforcement. Spurring the move to externalize authorization is the growing number of industry regulations and compliance needs (e.g. HIPAA/HITECH, PCI-DSS etc.), increase in security breaches and data leaks, as well as increase in highly visible and costly fraudulent and unauthorized transactions.

To help organizations address security and compliance concerns, OES provides centralized control and visibility of what users are authorized to do with sensitive applications, information, and other corporate resources. OES also provides organizations with the ability to centrally track and analyze *who has done what* through integrated runtime audit facilities.

Building enterprise class application security is not a common skill of most development teams. When attempted, the result often is inconsistent security capabilities from one application to the next, making administration and maintenance a costly and time consuming endeavor. Yet, in many applications authorization decisions are embedded into the application, making maintenance of the application lifecycle complex. OES authorization policies on the other hand can be defined, changed, and enforced dynamically as market, business, and regulatory requirements change without requiring code changes and lengthy development – test – QA – production cycles, therefore reducing time-to-market and development cost.

**Oracle’s Solution for Externalized Authorization**

OES provides, as illustrated below, fine-grained authorization for a wide variety of scenarios in Oracle as well as heterogeneous environments:
Authorization policy management and runtime enforcement is provided for sensitive applications, databases, containers (such as Java™, .NET), portals and content management systems (such as WebCenter and SharePoint), development frameworks, object relational mapping technologies, intermediaries (such as XML gateways and ESB’s), web services, and SOA infrastructure.

**Oracle Entitlements Server: Typical Usecases**

**Fine-Grained Authorization for Applications, Portals, Content, and Databases**

Oracle Entitlements Server can be used to protect all elements of an application:

- What UI elements (such as pages, tabs, portlets, fields, buttons) are visible or enabled
- What data the user can see (employee, customer, patient records) and elements of the data (credit card numbers, social security numbers, national identifiers, date of birth)
- What user can do with the data (view, update, approve, escalate)
- Whether a transaction should be allowed (only allow a junior trader to perform ten transactions up to a given amount per day, during business hours, if market volatility is low)

Protected information can be represented by records in a relational database, documents, reports, images, rich media, geospatial information, or anything else. Information can be secured in either application layer by using OES with object relational mapping technologies (such as Toplink, Hibernate) or in the data tier (with technologies such as Oracle Virtual Private Database).

**Authorization and Data Redaction for Internet API's, SOA, and Web Services**

Oracle Entitlements Server protect web services, SOA infrastructure, and internet API’s by:

- Blocking or permitting incoming requests based on fine grained ABAC based policies
- Perform deep packet inspection of SOAP or REST payloads and selectively permit or deny access based on request content
- Selectively redact or encrypt sensitive information in the web services response

This is often achieved without any changes to the backend web service or SOA application.

**Real-time Authorization for Enterprise Applications**

Oracle Entitlements Server ensures extremely low latency for mission-critical applications, and is engineered to scale and handle large volumes of sensitive resources, users, roles, and authorization decisions. OES is used in mission critical deployments with a wide variety of Oracle and non-Oracle based platforms and solutions. OES is Oracle’s strategic authorization engine and embedded in products such as Oracle Fusion Applications and Oracle Fusion Middleware technologies such as Oracle SOA Suite, Oracle WebCenter Portal & Spaces, Oracle ADF, and Oracle Identity and Access Management.

**Authorization Standards & Models**

Oracle Entitlements Server supports a large variety of authorization standards and models, including native support for XACML, Attribute Based Access Control (ABAC), NIST Role Based Access Control (RBAC), “Enterprise” RBAC, Java2 / JAAS Permissions, OpenAZ, and various models for enforcing data security. OES can also act as a Java2 Security Provider and plug directly into the JVM for controlling access to the file system, network and sensitive code among other things.

**Contact Us**

For more information about Oracle Entitlements Server, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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Oracle is committed to developing practices and products that help protect the environment.