Using Role-Based Access Control (RBAC) to Replace Traditional Oracle E-Business Suite Responsibility-Based Security

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Ravi Gaddam

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Agenda

• Traditional Responsibility Based Security
• Data Security
• Role Based Access Control (RBAC)
• Comparison
• RBAC in Oracle
• Benefits
• Using RBAC - Demo
• Q & A
Traditional Responsibility Based Security

- Responsibilities
- Menus
- Exclusions
**Role Based Access Control**

Defined

RBAC (Role Based Access Control) is an access control mechanism based on roles and permissions. It is an approach to restrict system access to authorised users.

Under a typical RBAC model access to various objects (permissions) are bundled and assigned to a role. Roles are assigned to users based on their jobs and roles in the business. Hence a user gets access to perform only those operations as required by his role in the organisation.
**RBAC Models**

**Hierarchical RBAC model**

- Role hierarchy is defined: **roles inherit permissions of their junior roles**
- Permissions are assigned to roles
- Users are assigned to roles
**RBAC Models**

**Hierarchical RBAC model**

- Role hierarchy is defined: roles inherit permissions of their junior roles
- Permissions are assigned to roles
- Users are assigned to roles
# How RBAC is different than Responsibilities?

## Quick Comparison

<table>
<thead>
<tr>
<th>Responsibilities</th>
<th>RBAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>• normally do not have direct link with the actual employee role or job</td>
<td>• reflects actual business jobs and roles</td>
</tr>
<tr>
<td>• provide user management only within Oracle Applications</td>
<td>• is a global security model integrating security and access across applications, networks and platforms;</td>
</tr>
<tr>
<td>• do not provide for categorisation of roles</td>
<td>• allows categorisation of roles and hence efficient user management</td>
</tr>
<tr>
<td>• do not use hierarchies</td>
<td>• Roles can be inherited using role hierarchies</td>
</tr>
</tbody>
</table>
Role Based Access Control
in Oracle Applications

• Builds upon Data Security and Function Security.
• Access control through roles.
• Consolidate the responsibilities, permissions, function security and data security policies.
• One-time setup.
• New Oracle User Management system.
Why should I consider RBAC?
Quick look at benefits

• Greater Productivity
• Cost Reduction
• Better Security
• Object Oriented
**User Management**

User Management Application helps system administrators to assign or un-assign responsibilities

Replaces traditional System Administrator > Security > User > Define.

This approach works well when we have limited number of users and responsibilities which doesn’t change very often.
User Management

Demo
Responsibility Security - Revisited

- User
- Responsibility

Menu
- Navigation
  - Function A
  - Function B
  - Function C
  - Function D
- Authorization

Responsibilities

Users
Functions and Permissions in RBAC

Responsibility Security

Menu
- Navigation
  - Function A
  - Function B
  - Function C
  - Function D
- Authorization
  - ✓

RBAC

Menu
- Navigation
  - Function A
  - Function B
  - Function C
  - Function D
- Permission Set
  - ✓
  - ✓
  - ✓
  - ✓

Grant
Role Categories

Role Categories → Roles → Responsibilities → Users
**Role Categories**

### Lookup Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Meaning</th>
<th>Description</th>
<th>Effective Tag From</th>
<th>Effective To</th>
<th>Enabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIAGNOSTICS_ROLES</td>
<td>Diagnostics Roles</td>
<td>List of selected Diagnostics Roles</td>
<td>12-Mar-2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFORMATION_TECHNOLOGY</td>
<td>Information Technology</td>
<td>Information Technology related roles</td>
<td>01-Jan-2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MISC</td>
<td>Miscellaneous</td>
<td>Miscellaneous</td>
<td>31-Dec-2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTA_TRAINING</td>
<td>Training</td>
<td>Training</td>
<td>05-Jul-2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAYABLES_ROLES</td>
<td>Payables Roles</td>
<td>Payables Roles</td>
<td>01-Oct-2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PURCHASING_ROLES</td>
<td>Purchasing Roles</td>
<td>Purchasing Roles</td>
<td>01-Mar-2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SECURITY_ADMIN</td>
<td>Security Administration</td>
<td>Roles which provide access to features related to Security Administration</td>
<td>31-Dec-2003</td>
<td></td>
<td></td>
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<tr>
<td>TERR_MGMT_JOB_ROLES</td>
<td>Territory Management Job</td>
<td>Territory Management Job Roles</td>
<td>19-Oct-2005</td>
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<td></td>
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<tr>
<td>TERR_MGMT_TASK_ROLES</td>
<td>Territory Management Task</td>
<td>Territory Management Task Roles</td>
<td>19-Oct-2005</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Roles

User Management

Roles and Role Inheritance

Search

Type
Name
Code
Application
Go

Role Inheritance Hierarchy

Create Role

Focus Name

All Roles, Responsibilities, and Groups
Roles & Responsibilities
Groups from other Source Systems

Legend

Category
Role
Responsibility
All Users (everyone)
Externally Managed Group
Pending Role Relationship

User Management Home Logout Preferences Help

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Role Inheritance

Demo
## Role Inheritance

![Oracle User Management Interface](image)

### Search
- **Type:**
- **Name:**
- **Code:**
- **Application:**

### Role Inheritance Hierarchy

<table>
<thead>
<tr>
<th>Focus Name</th>
<th>Code</th>
<th>Application</th>
<th>Active</th>
<th>Update</th>
<th>Add Node</th>
<th>Remove Node</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Roles, Responsibilities, and Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Manager</td>
<td>UMX</td>
<td>PURCH_MANAGER</td>
<td>Purchasing</td>
<td>✔</td>
<td>✔</td>
<td>+</td>
</tr>
<tr>
<td>Purchasing Buyer</td>
<td>UMX</td>
<td>PURCH_BUYER</td>
<td>Purchasing</td>
<td>✔</td>
<td>✔</td>
<td>+</td>
</tr>
<tr>
<td>Purchasing Buyer</td>
<td>FND_RESP</td>
<td>PO</td>
<td>PURCHASING_BUYER</td>
<td>Standard Purchasing</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Purchasing Inquiry</td>
<td>UMX</td>
<td>PURCH_INQUIRY</td>
<td>Purchasing</td>
<td>✔</td>
<td>✔</td>
<td>+</td>
</tr>
</tbody>
</table>
Assigning Roles

Demo
Assigning Roles
Controller Role Example

Demo
Controller Role Example
Q & A
Presenters Profile

• Riaz Rahaman is a Senior Associate, Technology Consulting at PwC (PricewaterhouseCoopers), Canada. Riaz has over 15 years of experience in using and implementing Oracle Applications eBusiness suite products for various clients.
  
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Experienced Resources
Strategy through Execution

- **Growing practice** – Organic, acquisitions, and alliances/JBRs
  - Acquired **Diamond** to broaden our strategic go-to-market offerings
  - Acquired **ISH** to broaden our Oracle Healthcare focus
  - Acquired **PRTM** who have been a strong partner with Oracle in their High Technology, Industrial Mfg, Aerospace & Defense sectors
  - Acquired resources and assets from **BearingPoint’s commercial practice**
  - Acquired **Entology** to enhance Oracle IdM capabilities
  - Acquired resources from **MTS Allstream** to enhance our Canadian practice

- **Global team** – More than 2,500+ Oracle specialists offer the full range of Oracle services (600 in the U.S.)

- **Experience** – Our team members are veterans of over 1,500 Oracle engagements

- **Cost-effective staffing options** – Including Global Delivery Centers in China and India, alliances, JBR’s and third party labor options

- **Top Oracle partner** – Oracle’s top tier “globally managed partner” and an Oracle Platinum Partner
We help business leaders anticipate, create and manage change.