

# Using Approvals Management Engine (AME) for Requisitions in R12

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## Introduction

Insert introduction from OUAG website here

## Changing Organizations

As organizations push more purchasing responsibility out to the field, a need for more flexibility during the requisition approval process has become required. Standard Employee / Supervisor or Position based hierarchies don't always meet our needs. Complex work (services) and more focus on projects have had an impact on who we want to financially and non-financially approve requisitions. Project Managers, Gate keepers, Legal teams, and collaborative groups are all getting involved in the procurement process earlier.

## Current State

There are many ways that existing requisition approval functionality can meet our needs. Position hierarchy, Employee/Supervisor hierarchy, direct or hierarchical routing, and utilizing include and exclude amounts for various attributes such as document total and account ranges.

However, if you need more flexibility modification of the requisition approval workflow is required. Modifications to the workflow is not typically managed via a self-service a self service tool and requires intervention by your technical team.

Organizations need an easier way to make quick and seamless changes to the approval hierarchy without technical intervention.

## What is the Approvals Management Engine (AME)?

The Approvals Management Engine provides a common way for Oracle to manage approvals for its applications. This includes the ability to use rules and attributes across applications thereby reducing redundant rule creation and creating unified rules across applications. AME uses business specific rules to manage the approvals required for a specific type of transaction

AME has a self-service business analyst dashboard to perform maintenance. This is a key factor because the dashboard is tailored for use by a representative of the business directly. Allowing the business to drive when and how approval rules are created or changed.

The image shows a screenshot of the Oracle Approvals Management Business Analyst Dashboard on the left and a 'Approval Process Setup' guide on the right. The dashboard includes a table of Transaction Types and a section for Recently Updated Rules. The guide lists four steps: 1. Select the transaction type, 2. Define the components (Attributes, Conditions, Action Types, Approver Groups), 3. Define the approval rules, and 4. Test Workbench.

Name	Application	Rules	Test
<a href="#">Purchase Requisition Approval</a>	Purchasing	[+]	[+]
<a href="#">Payables Invoice Approval</a>	Payables	[+]	[+]
<a href="#">Work Confirmation</a>	Purchasing	[+]	[+]
<a href="#">Requester Change Order Approval</a>	Purchasing	[+]	[+]
<a href="#">AMW Audit Procedure Approval</a>	Internal Controls Manager	[+]	[+]

**Approval Process Setup**

- 1. Select the transaction type**
- 2. Define the components**
  - Attributes**: Define attributes to fetch business facts for a specific transaction.
  - Conditions**: Define conditions to evaluate attributes within rules. If all conditions in a rule are true then the rule is active for the transaction.
  - Action Types**: Enable action types to specify the action to take if a rule is active for a transaction.
  - Approver Groups**: Define approver groups to contain approvers who are usually members of peer groups such as payroll or expenses department.
- 3. Define the approval rules**
  - Approval Rules determine the approvers or FV1 notification recipients required for a business transaction.
- 4. Test Workbench**
  - Define test cases or test real transactions to verify the approval setup, rules and associated approvers.

## Approval Rules

AME approval rules consist of the following pieces:

- Transaction Type
- Attributes
- Conditions
- Action Types
- Approval Groups

A *transaction type* represents “Which” type of application approval process will have a set of distinct rules applied to it. Examples of common transaction types are:

- Requisition Approval
- Requisition Change Approval
- Work Confirmation
- Supplier Registration Approval
- Invoice Approval

Picking the transaction type is the first step in defining approval rules.

An *attribute* is a business variable that has a single outcome for a transaction such as: Transaction amount, Purchasing Category, Cost Center, and Item Number. Ultimately attributes are used in conditions to provide one piece of the rule. The application comes pre-defined with many attributes that are related to each application. However, you can create attributes that do not come seeded. Additionally, there are many attributes that are required when utilizing a specific *action type*. These required attributes are a key piece of managing how the rule acts when it is utilized.

*Conditions* tell us what is true or false about a transaction. If X happens, then return a true value, otherwise return a false value and take an action. There are two types of conditions that can be utilized: Ordinary and List- Modifier. An ordinary condition evaluates items such as date, currency, and numbers. A list-modifier checks for a given approver and leads to an action.

An *action type* is an instruction to AME to modify a transaction's approval process in the manner you specify. Here is the available list of action types:

- Chain of Authority – Uses HR supervisory or HR position hierarchies.
- List Modification
- Substitution
- Pre Approval Group
- Post Approval Group

Sometimes, an action type will need to be applied to the transaction type. This means that when you first access the transaction type, the action type may not be available for its use, but by performing a quick search and applying, it will be available.

*Approval Groups* typically represent functional approvers outside a transaction's chain of authority, such as human-resource management and internal legal counsel, that must approve a transaction before or after management has done so.

When using pre- or post- list approval group action types you will have to create an Approval group. An approver group can either be an ordered set of one or more approvers (persons and/or user accounts) or it can be a list, which is dynamically generated at rule evaluation time.

## Examples

### *Business Example 1*

A local electric transmission company all requisition transactions over \$250,000.00. Require the approval of a legal representative. The legal team should be notified after the initial financial approval list has reviewed and approved the requisition. Within the group, the first team member to respond provides the approval for the lot.

Attribute is Requisition Transaction Total

ORACLE® Approvals Management  
Transaction Type: Purchase Requisition Approval

Rules | Test Workbench | Setup

Attributes | Conditions | Action Types | Approver Groups

**Attributes**

This page enables you to view attributes present in your transaction type, create new, and reuse existing attributes to specify the business components of a transaction such as total amount, a percent discount, and a person's salary.

**Search**

Attribute Category: All  
Item Class: All  
Data Type: All  
Name: REQUISITION\_TOTAL

Create | Use Existing Attribute

Attribute	Description	Category	Usage Type	Item Class	Data Type	Update	Delete
REQUISITION_TOTAL	Requisition Total	Others	Dynamic	Header	Currency		

Condition is defined as when transaction type is > \$250,000.00

ORACLE® Approvals Management  
Transaction Type: Purchase Requisition Approval

Rules | Test Workbench | Setup

Attributes | **Conditions** | Action Types | Approver Groups

Setup: Conditions >

Update Condition: REQUISITION\_TOTAL is greater than 250000,USD

Condition Type: Ordinary  
Attribute: REQUISITION\_TOTAL  
Data Type: Currency  
Item Class: Header

Show rules using this condition

**Details**

Currency Code: USD

REQUISITION\_TOTAL is greater than 250000

Approval group is defined as the legal team with individual or static entries of names from the HR people list of values

ORACLE Approvals Management  
Transaction Type: Purchase Requisition Approval

Rules | Test Workbench | Setup

Attributes | Conditions | Action Types | **Approver Groups**

Setup: Approver Groups >

**Update Approver Group :Legal Review Team**

\* Indicates required field

Cancel Apply

**Rules Using the Approver Group**

**Details**

Name: Legal Review Team  
 \* Description: Legal Review Team is required to review requisitions ova \$250K  
 \* Order Number: 2  
 Voting Method: First Responder Wins  
 Usage Type: Static  
 Query:   
 Dynamic Approver Group requires a SQL.

Validate

**Group Members**

Enter members for the static approver group.

Approver Type	Approver	Order Number	Delete
HR People	HR People: Ecker, Susan	1	
HR People	HR People: Andersen Richards, Katherine	2	

Add Another Row

Rule – combines the attributes, condition, action type and approval group to create our business rule.

ORACLE Approvals Management  
Transaction Type: Purchase Requisition Approval

Rules | Test Workbench | Setup

Rules >

**Update Rule: Legal review required for Requisitions over \$250K**

\* Indicates required field

Cancel Apply

Item Class: Header  
 Rule Type: Post List Approver Group  
 \* Name: Legal review required for Requisitions over \$250K  
 \* Start Date: 17-Dec-2007  
 \* End Date: 31-Dec-4712

**Other Instances of this Rule**

**Conditions**

Add Condition

Condition	Condition Type	Item Class	Remove
REQUISITION_TOTAL is greater than 250000,USD	Ordinary	Header	

**Actions**

Add Action

Action Type	*Action	Remove
post-chain-of-authority approvals	Require post-approval from Legal Review Team	

Cancel Apply

Requisition outcome:

ORACLE iProcurement

Shopping Cart Home Logout Preferences Help Diagnostics

Shop Requisitions Receiving

Requisition Information Approvals Review And Submit

**Checkout: Approvals and Notes**

Your requisition will be sent to the following list of approvers.

Save Submit Back Step 2 of 3 Next

**Approvals**

Manage Approvals

Schoon, Duane → Tindall, Paul → Petras, Jane → Legal Review Team

*Business Example 2*

If project type is Indirect, require requisition approval by Project Manager and then requester's immediate supervisor.

Attribute is project type

**ORACLE® Approvals Management**  
Transaction Type: Purchase Requisition Approval

Return to Dashboard Home

Rules | **Test Workbench** | Setup

Attributes | Conditions | Action Types | Approver Groups

Setup: Attributes >

**Update Attribute : JM\_PROJECT\_TYPE**

\* Indicates required field

Cancel | Apply

Name: JM\_PROJECT\_TYPE  
Item Class: Line Item  
\* Description: JM\_PROJECT\_TYPE

Data Type: String  
Approvers Type: None  
Value Set:

Usage Type: Dynamic

```
select pap.project_type
from pa_projects_all pap, po_req_distributions_all prd,
po_requisition_lines_all prl
where prl.requisition_header_id =
po_ame_setup_pvt.get_new_req_header_id(:transactionId)
and prl.requisition_line_id = prd.requisition_line_id
and pap.project_id = prd.project_id
order by prd.distribution_id
```

Enter SQL query for dynamic attributes.

Validate

Cancel | Apply

Condition is when the project type = Indirect

**ORACLE® Approvals Management**  
Transaction Type: Purchase Requisition Approval

Return to Dashboard Home

Rules | **Test Workbench** | Setup

Attributes | **Conditions** | Action Types | Approver Groups

Setup: Conditions >

**Update Condition: JM\_PROJECT\_TYPE in (Indirect)**

Cancel | Apply

Condition Type: Ordinary  
Attribute: JM\_PROJECT\_TYPE  
Data Type: String  
Item Class: Line Item

+ Show rules using this condition

**String Values**

String Value	Delete
Indirect	

Add Another Row

Cancel | Apply

Approval group is dynamic:

**ORACLE® Approvals Management**  
Transaction Type: Purchase Requisition Approval

Return to Dashboard Home

Rules | Test Workbench | Setup

Attributes | Conditions | Action Types | **Approver Groups**

Setup: Approver Groups >

**Update Approver Group : JM Project Manager**

\* Indicates required field

Cancel Apply

**Rules Using the Approver Group**

**Details**

Name: JM Project Manager

\* Description: JM Project Manager Indirect

\* Order Number: 1

Voting Method: Serial

Usage Type: Dynamic

Query:
 

```
select 'person_id'||person_id
from apps.pafv_key_members key, po_req_distributions_all
prd, po_requisition_lines_all prl, pa_projects_all pap
where prl.requisition_header_id =
po_ame_setup_pvt.get_new_req_header_id(:transactionId)
and prl.requisition_line_id = prd.requisition_line_id
and key.project_id = prd.project_id
and pap.project_type = 'Indirect'
```

Dynamic Approver Group requires a SQL.

Validate

Set up the Rule:

**ORACLE® Approvals Management**  
Transaction Type: Purchase Requisition Approval

Return to Dashboard Home Logout Prefer

Rules | Test Workbench | Setup

Rules: Approver Groups >

**Update Rule: JM Project Manager**

\* Indicates required field

Cancel Apply

Item Class: Header

Rule Type: List Creation

\* End Date: 31-Dec-4712

\* Name: JM Project Manager

\* Start Date: 04-Nov-2007  
(example: 20-Oct-2007)

**Other Instances of this Rule**

**Conditions**

Add Condition

Condition	Condition Type	Item Class	Remove
JM_PROJECT_TYPE in (Indirect)	Ordinary	Line Item	

**Actions**

Add Action

Action Type	* Action	Remove
Supervisory level	Require approvals up to the first superior.	
approval-group chain of authority	Require approval from JM Project Manager	

Cancel Apply

Use the AME Business Analyst Dashboard to test outcome:

**ORACLE** iProcurement Shopping Cart Home Logout Preferences Diagnostics

Shop Requisitions Receiving

Requisition Information Approvals Review And Submit

**Requisition Information: Edit Lines**  
\* Indicates required field Apply

Delivery Billing Accounts Attachments

Select Lines: Update Copy Delete

Select All Select None

Select Line	Description	Project	Task	Expenditure Type	Expenditure Organization	Expenditure Item Date	Split
<input type="checkbox"/> 1	Paper - requires 2-way match office supply item	JM 1	1.1	Supplies	Vision Operations	10-Aug-2007	
<input type="checkbox"/> 2	Paper - requires 2-way match office supply item	JM 2	1.1	Supplies	Vision Operations	10-Aug-2007	
<input type="checkbox"/> 3	Paper - requires 2-way match office supply item	JM 1	1.1	Supplies	Vision Operations	10-Aug-2007	
<input type="checkbox"/> 4	Paper - requires 2-way match office supply item	Bldg Renovation	1.0	Supplies	Vision Operations	10-Aug-2007	
<input type="checkbox"/> 5	Paper - requires 2-way	JM 1	1.1	Supplies	Vision Operations	10-Aug-2007	

**ORACLE** Approvals Management Return to Dashboard Home Logout Preferences Help Diagnostics

Transaction Type: Purchase Requisition Approval

Rules Test Workbench Setup

**Test Workbench**

**Run Real Transaction Test (1)**

**Test Cases**

Create

Select	Name	Description	Last Updated	Update	Delete
	No results found.				

**Run Real Transaction Test (1)**

**Test Workbench**

The Workbench enables you to define test cases to verify your approval setup. Approval Management treats a test case as a real transaction, It evaluates your defined rule and generates an approver list for your review.

**Getting Started**

- To create a new test case for the current transaction type, click Create.
- To view the applicable rules and approver list for an existing test case, select the test case and click Run.
- To duplicate an existing test case that you can modify later, select the test case and click Copy.
- To view the applicable rules and approvers for a real transaction, click Run Real Transaction Test.

Rules Test Workbench Setup Return to Dashboard Home Logout Preferences Help Diagnostics

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**ORACLE** Approvals Management  
Transaction Type: Purchase Requisition Approval

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Rules Test Workbench Setup

Test Workbench > Test Workbench > Real Transaction Test >

**Run Real Transaction**

To review the process stages that Approvals Management took to arrive at the applicable rules and approver list, click View Approval Process Stages.

[View Approval Process Stages \(1\)](#)

Transaction ID **134110**

**Applicable Rules**

Details	Description	Class	Rule Type	Category
<a href="#">Show</a>	JM Project Manager	Header	List Creation	Approver

**Final Processed Approver List**

Details	Order Number	Approver Type	Approver	Category	Status
<a href="#">Show</a>	1	HR People	Baker, Catherine	Approver	
<a href="#">Show</a>	2	HR People	Marlin, Amy	Approver	
<a href="#">Show</a>	9	HR People	Brown, Casey	Approver	

[Return to Test Workbench](#) [View Approval Process Stages \(1\)](#)

Rules Test Workbench Setup Return to Dashboard Home Logout Preferences Help Diagnostics

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### Additional Functionality

While this paper has touched on a few of AME's characteristics, it truly just skims the surface of the great functionality that this tool has to offer. In addition to dynamic approval groups and AME adds the following list of items to its flexible capabilities:

- Parallel approvals
- FYI notifications
- List-Creation Exception
- **If** invoice amount > \$500 USD and pay group = Employee, **THEN** require approval two job levels above requestor.
- List-Modification
- **If** any approver = Sam Clark, **THEN** grant final authority.
- Conflict Resolution
  - An approver will only be required to take action once if they are repeated for some reason
  - If chain-of-authority and pre or post approval rule include the same person, chain-of-authority wins.
  - If pre and post rules include the same person, pre wins.