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TECHNOLOGY AND APPLICATIONS FORUM
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Approvals Management Engine R12 (AME) Demystified

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Agenda



- Advantages of AME
- Structure of AME
- Setup and Usage for a Transaction Type
- Configure AME for a Transaction Type
 - Attribute
 - Condition
 - Action Type
 - Approver Group
 - Rule
- Enabling AME for a Transaction Type
- Tips/Techniques



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Advantages of AME



- Enable business analysts to define business rules (approval rules) without coding/customization
- Provides framework to define business rules so applications can communicate with AME to manage transaction approval
- Approval Rules can be defined for a specific application or can be shared between applications
- Parallel Approval Process
- Supports approval hierarchies based on Job, Supervisor, Position and list of individuals (Approval Group based)



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Integrating Application



- Integrated Application is any application within Oracle E-Business Suite that uses AME to generate an approver list for its approval process.





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Applications integrated with AME



#	Integrating Application	#	Integrating Application
1	Advanced Benefits	21	Oracle Deal Management
2	Bills of Material	22	Oracle Price Protection
3	Cash Management	23	Partner Management
4	Contracts Core	24	Payables
5	Engineering	25	Payroll
6	Enterprise Asset Management	26	Process Manufacturing Logistics
7	Enterprise Performance Foundation	27	Process Manufacturing Process Execution
8	E-Records	28	Process Manufacturing Product Development
9	Field Service	29	Process Manufacturing Regulatory Management
10	Financial Consolidation Hub	30	Public Sector HR
11	Financials Common Modules	31	Purchasing
12	Human Resources	32	Quality
13	iAssets	33	Quoting
14	Internal Controls Manager	34	Receivables
15	Inventory	35	Service
16	iSupplier Portal	36	Service Contracts
17	Labor Distribution	37	Sourcing
18	Learning Management	38	Student System
19	Lease and Finance Management	39	Work in Process
20	Manufacturing Execution System for Process Manufacturing		



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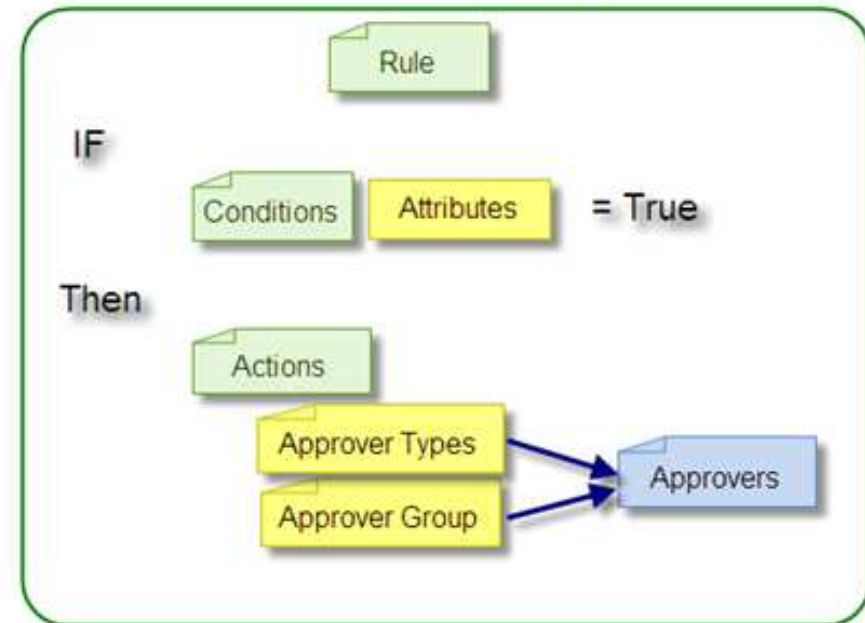
Structure of AME

AME Structure

A framework of well-defined approval rules made of 5 components:

1. Transaction Type
2. Attributes
3. Conditions
4. Actions
5. Approval Groups
6. Rules

Transaction Type





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Setup and Usage for a Transaction Type

- Uses Role Based Access Model (RBAc) in 11i.AME.B
- Access & Security defined at 2 levels:
 1. Data Security – To define access to transaction type
 2. Function Security – To define access to AME functions

- AME Dashboards
 1. AME Business Analyst (Non-Technical)
 2. AME Administrator (Technical)



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Setup and Usage for a Transaction Type



AME Roles

1. Approvals Management Process Owner
2. Approvals Management System Viewer
3. Approvals Management Business Analyst
4. Approvals Management System Administrator
5. Approvals Management Administrator



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Configure AME for a Transaction Type

Business Analyst Dashboard

Approval Process Setup

- Attributes
- Conditions
- Action Types
- Approver Groups
- Rules

ORACLE Approvals Management

Business Analyst Dashboard
This table displays the transaction types in the order you accessed them.

Enter Transaction Type name here

Name	Application	Rules	Test	Setup
Purchase Requisition Approval	Purchasing			
Payables Invoice Approval	Payables			
CHECKLIST	Human Resources			
AMW Audit Procedure Approval	Internal Controls Manager			
AMW Control Approval	Internal Controls Manager			

Approval Process Setup

- 1. Select the transaction type**
Purchase Requisition Approval
- 2. Define the components**
Approvals Management uses these components within the approval rules.
 - 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 FYI 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.

Quick Links

- Configuration Variables
- Setup Report

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Attributes



- Placeholder for transaction type data elements
- Basic building blocks of an AME Rule
- Can be Static or Dynamic in nature
- Seeded Attributes and Custom Attributes can be defined
- Can be shared across various transaction types
- 3 Levels – Header, Line-Item and Cost-Center



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Definition of Attribute



Shop | Requisitions | Receiving

Requisitions | Notifications | Approvals

Requisitions: Requisitions >

Requisition 11100036

Copy To Cart | Cancel Requisition | Change

Header-Level Attribute Name: Deliver-To
 Header Level Attribute Value: Chicago, Illinois, IL, 60661

Description: Test1
 Created By: Kamath, Sujay
 Creation Date: 02-Dec-2011 14:04:27

Status: In Process
 Change History: No
 Urgent Requisition: No
 Attachment: None
 Note to Buyer:

Line-Item Level Attribute: Unit, Quantity

Details

Line	Description	Need-By	Deliver-To	Unit	Quantity	Price	Amount (USD)	Details	Order
1	Test1	25-Feb-2012 00:00:00	New York NY	EACH	2001	1 USD	2001.00		
Total							2001.00		

Cost-Center Level Attribute Name: Charge Account

Charge Account	Project Number	Task Number	Expenditure Type	Expenditure Organization	Expenditure Item Date	Percent
0005.000000.0000.65012.0000000.0000						100



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Conditions

- One or more *Attributes* are used to define a *Condition*
- If result of condition is true, then AME engine triggers a *Rule*

Example:

Condition 1: If Deliver-To-Location=US.0219, then enable rule.

Condition 2: If Requisition Total > 1000 & <= 1999 & Currency=USD, then enable rule.

Condition 3: If Requisition Total > 2000 & <=2999 & Currency=USD, then enable rule.



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Definition of Condition



ORACLE Approvals Management
Transaction Type: Purchase Requisition Approval

Navigator Favorites Return to Dashboard Home Logout Preferences Help Diagnostics

Rules Test Workbench Setup

Attributes Conditions Action Types Approver Groups

Conditions

Regular List Modifiers

Search

Item Class: All
Condition Type: All
Attribute:
Go Clear

3 Ordinary Conditions defined for Purchase Requisition Approval

Create

Condition	Item Class	Condition Type	Update	Delete
DELIVER_TO_LOCATION in (US.0219)	Line Item	Ordinary		
REQUISITION TOTAL is greater than 1000 and less than or equal to 1999,USD	Header	Ordinary		
REQUISITION TOTAL is greater than or equal to 2000 and less than or equal to 2999,USD	Header	Ordinary		



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Action Types



- Action Type is a collection of one or more actions
- Used to modify a transaction's approval process
- Used to ascend organization's hierarchies
- They are grouped based on 3 approver types: Job, HR Position and Approver Group



Action Types

List of most common Action Types grouped by Approver Types

Approver Type	Action Type
Job based	absolute job level
	final approver only
	manager then final approver
	relative job level
	supervisory level
HR Position based	hr position
	hr position level
Approver Group based	pre-chain-of-authority approvals
	post-chain-of-authority approvals
	approval-group chain of authority



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Definition of Action Types



ORACLE Approvals Management
Transaction Type: Purchase Requisition Approval

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Rules Test Workbench Setup

Attributes Conditions **Action Types** Approver Groups

Action Types
To reinstate changed configuration details to original values click Revert.

Revert (1) Apply

Search

Rule Type All Go

Use Existing Action Type

Select Name	Description	Rule Type	Order Number	Ordering Mode	Voting Method	Remove
approval-group chain of authority	Chain of authority includes an approval group	Chain Of Authority	1	Serial	Serial	

Actions: approval-group chain of authority

Action	Update	Delete
Require approval from XX TEST APPROVER		
Require approval from XX TEST2 APPROVER		
Require approval from XX TEST3 APPROVER		

Revert (1) Apply

Annotations:

- Approver Groups (circled)
- means ascend using hierarchy of approvers (pointing to Chain Of Authority)
- List of approver groups, which is defined here. (pointing to the list of actions)
- Serial, Parallel, Serial (circled in red)
- Serial, Consensus, First Responder Wins, Serial (circled in red)



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Approver Groups

- Used to fetch approves from integrated application (e.g.: HRMS)
- Can be Static or Dynamic in nature
- Static Approver Group is based on constant list of approvers
- Dynamic Approver Group is based on SQL query
- Voting Methods determine:
 - Order of notification to group members
 - Decision of group's approval



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Definition of Approver Group

ORACLE® Approvals Management
Transaction Type: Purchase Requisition Approval

Navigator Favorites Return to Dashboard Home Logout Preferences Help Diagnostics

Rules Test Workbench Setup

Attributes Conditions Action Types Approver Groups

Approver Groups
To reinstate changed configuration details to original values click Revert.

Revert (1) Apply

Create Use Existing

List of Approver Groups

Name	Description	Type	Order Number	Voting Method	Update	Remove
XX TEST APPROVER	XX TEST1 APPROVER	Static	1	Serial		
XX TEST2 APPROVER	XX TEST2 APPROVER	Static	2	Serial		
XX TEST3 APPROVER	XX TEST3 APPROVER	Static	3	Serial		



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Definition of Approver Group



ORACLE® Approvals Management
Transaction Type: Purchase Requisition Approval

Navigator Favorites Return to Dashboard Home Logout Preferences Help Diagnostics

Rules Test Workbench Setup
Attributes Conditions Action Types Approver Groups
Setup: Approver Groups >

Update Approver Group :XX TEST APPROVER
* Indicates required field

Cancel Apply

Rules Using the Approver Group

Details

Name: XX TEST APPROVER
* Description: XX TEST1 APPROVER
Serial: Serial
Order Number: 1
Voting Method: Serial
Usage Type: Static
Query: [Empty text area]

Serial
Consensus
First Responder Wins
Order Number
Serial

Static
Dynamic
Static

If "Usage Type" is Dynamic, then an SQL Query goes in here to derive/fetch the approvers from the application.

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: Lay, John	1	

Add Another Row

Cancel Apply



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Definition of Approver Group



Voting Methods Explained

Voting Regime Name	Description
Serial	Members are notified one after the other; All members must approve for the group to approve.
Consensus	Members are notified in parallel; All members must approve for the group to approve.
First-Responder-Wins	Response of the first member to respond to the notification requesting approval becomes the group's approval decision. Responses of the remaining group members are stored in the AME transaction log and their responses are ignored.
Order-Number	Members are notified in the order of their order numbers. Members with same order numbers are notified in parallel.



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Rule



- Rule (a.k.a Approval Rule) used to transform business rule into approval rules to generate approver list
- Constructed using Rule Type, Item Class, Category, Conditions and Attributes
- Most rule types are used to generate chains-of-authority
- Rules can be prioritized using rule priorities for a transaction type
- Rules can be defined as “FYI Rule” or “Approval Rule”
- Conditions and Actions cause the rule to trigger



Definition of Rule



ORACLE® Approvals Management
Transaction Type: Purchase Requisition Approval

Rules | Test Workbench | Setup | **AME Rules**

Rules
To use a rule defined in another transaction type or an inactive rule in this transaction type, click Use Existing Rule.

Show Search Options | Create | Use Existing Rule

Name	Rule Type	Item Class	Start Date	End Date	Category	Update	Remove	Duplicate
XX TEST2	List Creation	Header	23-Feb-2012	31-Dec-4712	Approver			
XX TEST APPROVER	List Creation	Line Item	23-Feb-2012	31-Dec-4712	Approver			
XX TEST3	List Creation	Header	23-Feb-2012	31-Dec-4712	Approver			

ORACLE® Approvals Management
Transaction Type: Purchase Requisition Approval

Rules | Test Workbench | Setup

Rules >
Update Rule: XX TEST2
* Indicates required field

Item Class: Header
Rule Type: List Creation
* Name: XX TEST2
* Start Date: 23-Feb-2012
* End Date: 31-Dec-4712

Other Instances of this Rule

Transaction Type	Start Date	End Date
No results found.		

Conditions

Condition	Condition Type	Item Class	Remove
REQUISITION_TOTAL is greater than 1000 and less than or equal to 1999,USD	Ordinary	Header	

Actions

Action Type	* Action	Remove
approval-group chain of authority	Require approval from XX TEST2 APPROVER	



Rule – Rule Types

#	Rule Type	Description of usage
1	List Creation	Generate chains of authority Uses action types that ascend an organizational hierarchy to generate one or more chains of authority A required attribute typically identifies the first approver in each chain A specific action determines how many approvers are in each chain
2	List Creation Exception	Generate chains of authority Suppresses selected list-creation rules Contains at least 1 ORDINARY condition and at least 1 EXCEPTION condition
3	List Modification	Modify the default chain of authority generated by all applicable “List Creation” and “List Creation Exception” rules Must have exactly 1 list-modification condition Commonly used to REDUCE and EXTEND an approver's signing authority and
4	Substitution	Delegate one approver's authority to another approver Must have exactly 1 list-modification condition
5	Pre List Approver Group	Used to add approvers BEFORE chain of authority
6	Post List Approver Group	Used to add approvers AFTER chain of authority
7	Combination	Used when several business rules apply to exactly the same business case
8	Production	In AME, the Action Type generates variable-name or value pair in the Action's parameters called “Productions”. The Production Rule's purpose is to pass those Productions (Variable Name or Value) to <u>Oracle Purchasing</u> application or any integrating application.



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AME Test Workbench

- Diagnostic Utility to test and validate approval rules setup in AME for a transaction type
- Useful to validate that rules are triggered based on business case scenarios

The screenshot shows the Oracle Approvals Management Test Workbench interface. The page title is "ORACLE Approvals Management" with a sub-header "Transaction Type: Purchase Requisition Approval". Navigation links include "Navigator", "Favorites", "Return to Dashboard", "Home", "Logout", "Preferences", "Help", and "Diagnostics". The main menu has "Rules", "Test Workbench", and "Setup". The "Test Workbench" section is active, showing "Run Test Case: XX TEST GT2K LT3K". A button "View Approval Process Stages (1)" is visible. Below this, the "Transaction ID -30" is displayed. The interface contains two tables: "Applicable Rules" and "Final Processed Approver List".

Details	Description	Class	Rule Type	Category
Show	XX TEST3	Header	List Creation	Approver
Show	XX TEST APPROVER	Line Item	List Creation	Approver

Details	Order Number	Approver Type	Approver	Category	Status
Show	1	HR People	Elliot, Mark	Approver	
Show	2	HR People	Lay, John	Approver	



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Enabling AME for a Transaction Type

AME approval rules enabled for Purchase Requisition Approval in iProcurement

ORACLE Purchasing

Update Document Type: Requisition Purchase for US Operating Unit

* Indicates required field

Document Name: Purchase Requisition

Approval | **Control**

Owner Can Approve
 Approver Can Modify
 Can Change Forward-To
 Can Change Approval Hierarchy

Approval Workflow: Requisition
Workflow Start Process: Main Requisition Approval
Approval Transaction Type: PURCHASE_REQ
Forward Method: Direct
Default Hierarchy: [Empty]

Security Level: Public
Access Level: Full
Autocreate Workflow: PO Create Documents
Autocreate Workflow Start Process: Overall Document Creation/Launch
 Use Contract Agreements for Auto-Sourcing

This setup enables AME rules to be implemented for Purchase Requisition approval

Cancel | Apply



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Implementation Consideration/Tips

- Prepare & document set of business cases
- Each business case must be detailed enough to define & configure AME components
- Each business case must accompany with test case scenarios
- Represent approval rules using either Approval Matrix or Decision Tree
- Leverage R12 Enhancements:
 1. Position Hierarchy based Approvals
 2. Parallel Approvals
 3. Support for FYI Notifications