Oracle Approvals Management (AME) Case Studies for AP, PO and HR

Presented By
Susan Behn

VP, Oracle Practice
Agenda

- AME Product Overview
- AME and Approval Workflow
- Sample Business Case Scenarios
  - Payables
  - Purchase Requisitions
  - Human Resources – iRecruitment Vacancy Approval
What is AME?

- Purpose is to find approvers based on business rules
  - AME generates approver list
  - AME returns next approver to calling application
  - Request for next approver re-generates approver list to return next approver to calling application
- Integrated with multiple E-Business applications such as HR, PO and AP
- APIs allow integration with 3rd party apps
Advantages of AME

- Approval Rules can be developed by business users with minimal development assistance
- Approver Lists leverage off existing Oracle hierarchies (e.g. HR supervisor, HR position)
- Approver Lists can also leverage off custom hierarchies
- AME responds to changes such as organization hierarchies or rule changes
- Alternative is workflow customization
  - Requires significant development expertise
R11i vs R12

- Features available to more transactions in R12
  - Parallel Approvals
  - Position Hierarchy
  - FYI Notifications
  - Not available for all transaction types – MetaLink Id: 338508.1
    - Product teams for each module develop integration to AME

- Integrated with more applications in R12
  - R11i – 178 transaction types; R12 – 258 types
AME Access

- AME uses Oracle Role Based Access Model (RBAC) to access AME components

- Functional Administrator Responsibility
  - Grant access to data – (who can see what transaction type)

- User Management Responsibility
  - Login in as the SYADMIN user
  - Grant access to roles
    - **Approvals Management Business Analyst** - define business cases
    - **Approvals Management Administrator** - add transaction types, add approver types and view logs
Business Analyst Dashboard

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

### Transaction Types

<table>
<thead>
<tr>
<th>Name</th>
<th>Application</th>
<th>Rules</th>
<th>Test</th>
<th>Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payables Invoice Approval</td>
<td>Payables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUN Recipient Intercompany Transaction</td>
<td>Financials Common Modules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMM Audit Procedure Approval</td>
<td>Internal Controls Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMM Control Approval</td>
<td>Internal Controls Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMM Risk Approval</td>
<td>Internal Controls Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Recently Updated Rules

This table displays the rules whose definition and usage has changed.

Since number of days | | | 
50 Go

### Quick Links

- Configuration Variables
- Setup Report

---

Approval Process Setup

1. Select the transaction type
   - Payables Invoice 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.
   - Rules

4. Test Workbench
   - Define test cases or test real transactions to verify the approval setup, rules and associated approvers.
   - Test Workbench
### Administrator Dashboard

This page displays the transaction types and their association with specific Oracle applications.

* Indicates required field

#### Transaction Types

<table>
<thead>
<tr>
<th>Name</th>
<th>Transaction Type Key</th>
<th>Application</th>
<th>Update Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA Audit Procedure Approval</td>
<td>AP</td>
<td>Internal Controls Manager</td>
<td></td>
</tr>
<tr>
<td>AMA Control Approval</td>
<td>CTRL</td>
<td>Internal Controls Manager</td>
<td></td>
</tr>
<tr>
<td>AMA Risk Approval</td>
<td>RISK</td>
<td>Internal Controls Manager</td>
<td></td>
</tr>
<tr>
<td>BOM ERES Bill of Materials Creation</td>
<td>oracle.apps.bom.billCreate</td>
<td>Bills of Material</td>
<td></td>
</tr>
<tr>
<td>BOM ERES Bill of Materials Update</td>
<td>oracle.apps.bom.billUpdate</td>
<td>Bills of Material</td>
<td></td>
</tr>
<tr>
<td>BOM ERES Operational Routing Creation</td>
<td>oracle.apps.bom.routingCreate</td>
<td>Bills of Material</td>
<td></td>
</tr>
<tr>
<td>BOM ERES Operational Routing Update</td>
<td>oracle.apps.bom.routingUpdate</td>
<td>Bills of Material</td>
<td></td>
</tr>
<tr>
<td>CE Bank Account Signing Authority Approval</td>
<td>CEBASIG</td>
<td>Cash Management</td>
<td></td>
</tr>
<tr>
<td>CHECKLIST</td>
<td>CHECKLISTID</td>
<td>Human Resources</td>
<td></td>
</tr>
<tr>
<td>CWB: Employee Eligibility</td>
<td>EMPELIG</td>
<td>Advanced Benefits</td>
<td></td>
</tr>
</tbody>
</table>

Users

Employees

Positions

TCA Parties

Etc…
AME Building Blocks

- Configuration Variables
- Transaction Types
- Attributes
- Conditions
- Actions/Action Types
- Approver Groups
- Rules
Configuration Variables

- Control runtime behavior
- Default applies to all transaction types

![Configuration Variables](image-url)

Change for specific trans. type
Transaction Types

- What will be approved
  - Invoice, requisition, salary change...
- Custom transaction types can be created
Attributes

- Variables used to build rules (e.g. invoice amount, supplier, etc.)
  - Can be static (constant value) or dynamically retrieved at runtime (SQL query)
- Basic attributes seeded for all transaction types
  - Existing attributes can be modified
    - SUPERVISORY_NON_DEFAULT_STARTING_POINT_PERSON_ID – Update to start with a different person
- Create additional attributes for anything linked to transaction id for header (invoice id, requisition id)
Seeded Attributes

- Examples from the Payables Invoice Approval transaction type

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
<th>Category</th>
<th>Usage Type</th>
<th>Item Class</th>
<th>Data Type</th>
<th>Update</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION AMOUNT</td>
<td>Invoice distribution amount</td>
<td>Others</td>
<td>Dynamic</td>
<td>Line Item</td>
<td>Currency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION ASSET TRACKING FLAG</td>
<td>Flag that indicates if distribution line is tracked in Oracle Assets (Y or N)</td>
<td>Others</td>
<td>Dynamic</td>
<td>Distribution</td>
<td>String</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION COST CENTER</td>
<td>Account cost center</td>
<td>Others</td>
<td>Dynamic</td>
<td>Distribution</td>
<td>String</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION CREATION DATE</td>
<td>Standard who column</td>
<td>Others</td>
<td>Dynamic</td>
<td>Distribution</td>
<td>Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION DESCRIPTION</td>
<td>Description</td>
<td>Others</td>
<td>Dynamic</td>
<td>Distribution</td>
<td>String</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION EXPENDITURE TYPE</td>
<td>Project expenditure type used to build Accounting Flexfield for project-related distribution line</td>
<td>Others</td>
<td>Dynamic</td>
<td>Distribution</td>
<td>String</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPPLIER INVOICE DISTRIBUTION GL ACCOUNT</td>
<td>GL Account</td>
<td>Others</td>
<td>Dynamic</td>
<td>Distribution</td>
<td>String</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Create Attribute for Sales Tax Approval Rule

- Attribute to return the number of sales tax lines that exist

Lookup code = TAX
Tax code name = SALES TAX
Conditions

- Represent the *IF* part of an approval rule
- Attributes are evaluated runtime
  - This is why AME adjusts immediately to changes
- Result can either be true or false
Actions/Action Types

- Represent the *Then* part of an approval rule
- Provide instruction to AME when an approval rule has been satisfied
- Determine the approvers and number of approvers
- Action Types are grouping of actions
Actions/Action Types

- Action Type for Rule Type
- Actions for Action Type
<table>
<thead>
<tr>
<th>Action Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute-job-level</td>
<td>~Ascends HR supervisor hierarchy ~Based on specific job level</td>
<td>Require approvals up to at least job level six • Specific purchase types</td>
</tr>
<tr>
<td>Relative-job-level</td>
<td>~Ascends HR supervisor hierarchy ~Based on job level relative to requester’s job level</td>
<td>Require approvals at least four levels up • Pay changes</td>
</tr>
<tr>
<td>Action Type</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Manager-then-Final-Approver</td>
<td>~Ascends HR supervisor hierarchy ~Supervisor and final approver are required to approve</td>
<td>Require approval up to first supervisor and level six final approver • Capital with CFO approval</td>
</tr>
<tr>
<td>Supervisory-Level</td>
<td>Ascends HR supervisor hierarchy a specified number of levels</td>
<td>Require approvals up to three supervisors • Expenses</td>
</tr>
</tbody>
</table>
# Actions/Action Types

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
</table>
| HR-Position                          | Ascends HR position hierarchy up to a specified position | Require approvals up to Accounting Manager  
  • HR approvals                      |
| Approver-Group                       | ~Ascends custom approver hierarchy  
  ~Builds chain-of-authority type approver list | If transaction item is related to a project  
  • Approver groups based on project roles |
## Actions/Action Types

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final-Authority</td>
<td>Grants final authority to an approver by ending the approval chain when target approver is reached</td>
<td>If Approver is Susan Behn, allow final approval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• VP Approval</td>
</tr>
<tr>
<td>Pre and Post Chain-Of-Authority</td>
<td>Approvers are added before or after normal chain-of-authority list build for a transaction</td>
<td>Require IT pre-approval for hardware purchase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Accounting and Technical</td>
</tr>
</tbody>
</table>
Static Approver Group

- Approver Types – User, Employee, Position
- Try to avoid too many static approvers due to maintenance
Dynamic Approver Group

• Get key members with role “Project Manager” for each project on invoice distributions

Will return multiple project managers if more than one project referenced in distribution lines.
Rules

- Represent the translation of an organization business approval rule in AME
- Associate one or more **conditions** to a rule
  - **When** the rule applies
- Select an **action type** to build approver list
  - **What** to do when the conditions are met
Rule Types

- List Creation
  - Generate Chain-of-Authority Approver Lists
    - IF INVOICE_AMOUNT > $500K, THEN REQUIRE APPROVALS UP TO 2 SUPERVISORS

- List-creation Exceptions
  - Uses one ordinary condition and one exception condition
    - IF INVOICE_AMOUNT < 1000 AND (Exception) SUPPLIER_TYPE IS IN (‘UTILITY’) THEN REQUIRE APPROVALS UP TO 1 SUPERVISORS

- Combination
  - Combination of actions
    - IF REQUESTER IS ‘JOHN DOE’, REQUIRE PRE-APPROVAL FROM TEAM LEAD, POST-APPROVAL FROM AP MANAGER
Rule Types

- List-Modification
  - Used to extend or reduce final approver authority
    - IF INVOICE_AMOUNT > 5000 AND PAYGROUP IS ‘COMPEQUIP’ AND ANY APPROVER IS GERALD JONES GRANT FINAL AUTHORITY

- Substitution
  - Allows an approver on approver list to be substituted for another person
  - Alternative for vacation rules
    - IF ANY APPROVER IS GERALD JONES, THEN SUBSTITUTE SUSAN BEHN FOR THE APPROVER

- Pre- and Post-List
  - Approvers are inserted either before or after the normal chain-of-authority approver list
    - IF LINE-TYPE IS ‘TAX’, THEN REQUIRE PRE-APPROVAL FROM TAX DEPARTMENT
Testing Workbench

- 11i.AME.B provides a testing workbench to allow defined business rules to be evaluated and tested against transactions
- Testing workbench allows user to verify various aspects of setups
  - Are attribute values, particularly custom attributes, retrieving values correctly?
  - Does the invoice satisfy the appropriate rule?
  - Is the proper approver chain being generated for the transaction based on the rule chosen?
- Examples will be shown in Business Cases later in this presentation
AME and Approval Workflows

- Approval routing is controlled by AME rules via workflow
- Approval workflow sends request to AME to find approvers
- AME sends person_id, user_id, position_id, etc… back to workflow
  - ID sent is based on approver type
- Workflow sends notification to person or user identified by AME
AME and Approval Workflow

- Invoice Approval Workflow *Identify Approver* node calls the AME API to identify next approver
- Workflow sends the notification
Planning for AME

- Plan for all corporate rules using flow charts or decision trees
  - Gain support from the management team and users
  - Provides basis for testing
  - Improves overall logic by identifying combinations
  - Identify alternatives
  - Speeds implementation process
  - Identifies potential problems
Payables Expense Reports Setup for AME

- Setup requirements vary by transaction type
  - Refer to the user guide for the application
- Options required for Payables Expense Reports
Payables Invoices Setup for AME

Payables Options

- Options required for Payables Invoices
Purchasing Setup for AME

Document Types

- Options required for Requisitions
- Enter the approval transaction type for the document type to use AME.
  - PURCHASE_REQ for Purchase Requisition Approval
  - INTERNAL_REQ for Internal Requisition Approval
iRecruitment Vacancy Approval Setup for AME Step 1 – Profile Option

- iRecruitment Vacancy Approval is delivered with seeded rules
- If different rules are needed, create a custom transaction type for iRecruitment
- Change the profile option IRC: Vacancy Approval Transaction Type to the new transaction type name
iRecruitment Vacancy Approval Setup for AME Step 2 – Form Parameters

- Go to Application Developer Responsibility → Application → Function
- Search for IRC_VAC_DETS_NET
- Go to the Form tab and change the value for the AMETranType to the new transaction type name in the Parameters
Business Case 1 - Payables

- For project related invoices, require pre-approval from key project members in the following roles:
  - Project Manager
  - Director

- Require approval for project related invoices as follows:
  - 500 - 10K  Go up supervisor hierarchy 1 level
  - >10K       Go up supervisor hierarchy 2 levels
Business Case 1 – AME Components

- Transaction Type = Payables Invoice Approval
- New Conditions
  - SUPPLIER_INVOICE_AMOUNT >= $500 and <= $10,000
  - SUPPLIER_INVOICE_AMOUNT > $10,000
- Actions/Action Types – use existing action types – not new
  - Supervisory Level – Require approvals up to the 1st, 2nd or 3rd supervisor
  - Pre-chain-of-authority approvals – pre-approval from approver groups
- New Dynamic Approver Groups to find employee in key role
  - SB_PROJECT_MANAGER
  - SB_DIRECTOR
- New Rules
  - Option 1 ***This options shown in example on following slides
    - Combination Rule for $500 to $10,000
    - Combination Rule > $10,000
  - Option 2
    - Pre-Approval Rule
    - Supervisor Rule
Business Case 1 - Conditions

- SUPPLIER_INVOICE_AMOUNT >= 500 and <= 10K

- SUPPLIER_INVOICE_AMOUNT > 10K
Business Case 1 – Approver Groups

- Create SB_PROJECT_MANAGER approver group as shown
- Also Create SB_PROJECT_DIRECTOR approver group with ‘Director’ as role
Business Case 1 - Actions

- Use existing actions and select pre-chain-of-authority-approvals

<table>
<thead>
<tr>
<th>Select Name</th>
<th>Description</th>
<th>Rule Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-chain-of-authority approvals</td>
<td>group approvals before the chain of authority</td>
<td>Pre List Approval Group</td>
</tr>
<tr>
<td>post-chain-of-authority approvals</td>
<td>group approvals after the chain of authority</td>
<td>Post List Approval Group</td>
</tr>
</tbody>
</table>

- Approval Groups will be available as actions

<table>
<thead>
<tr>
<th>Require pre-approval from SB Project Director</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Require pre-approval from SB Project Manager</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Business Case 1 - Rules

• Combination Rule for Project Invoices 500 – 10K
Business Case 1 - Rules

- Combination Rule for Project Invoices > 10K
Business Case 1 - Test

- Create Invoice with Project on distribution line
- Invoice Amount $6000 related to Project
- Susan Behn is Requester, Pat Stock is Susan’s Supervisor
- Pat Stock is also Project Manager for FP201

![Invoice Image]
Testing Workbench

- Get the ID of the transaction
- Run real transaction test
- Enter transaction id and click ‘GO’

Real Transaction Test

* Indicates required field

Transaction Id

Tip: Transaction ID is the ID of a real transaction which AME uses to evaluate rules and generate approvers.
Testing Workbench

- Scroll down to view values of all attributes
- Click Run Test Case to see test results

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_LAST_UPDATE_DATE</td>
<td>31-Oct-2007</td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_PA_ADDITION_FLAG</td>
<td>IE</td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_PA_QUANTITY</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_PO_BUKE_EMP_NUM</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_PO_MATCHED</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_PO_REQUESTER_EMP_NUM</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_REFERENCE_1</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_REFERENCE_2</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INV_DISTRIBUTION_EXPENDITURE_ITEM_DATE</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INV_DISTRIBUTION_LINE_TYPE_LOOKUP_CODE</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INV_DEST_PROJECT_ACCOUNTING_CONTEXT</td>
<td></td>
</tr>
<tr>
<td>JOB_LEVEL_NON_DEFAULT_STARTING_POINT_PERSON_ID</td>
<td></td>
</tr>
<tr>
<td>SUPERVISORY_NON_DEFAULT_STARTING_POINT_PERSON_ID</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_ASSETS_TRACKING_FLAG</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_COST_CENTER</td>
<td>110</td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_CREATION_DATE</td>
<td>31-Oct-2007</td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_DESCRIPTION</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_EXPENDITURE_TYPE</td>
<td></td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_GL_ACCOUNT</td>
<td>7530</td>
</tr>
<tr>
<td>SUPPLIER_INVOICE_DISTRIBUTION_GL_BALANCING</td>
<td></td>
</tr>
<tr>
<td>Run Test Case (2)</td>
<td></td>
</tr>
</tbody>
</table>
Testing Workbench

- Use + to show details for rules and approvers
- View Approval Process Stages to view additional details such as repeated approvers
- Displays Final approver list - Note there are only two approvers
  - Expected three approvers - Project Manager, Project Director, Supervisor
- View Approval Process Stages for more details
Testing Workbench - Expand Rule Details

- Rule details expanded
- Shows rule applied, applicable conditions met and resulting actions

<table>
<thead>
<tr>
<th>Details Description</th>
<th>Class</th>
<th>Rule Type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Invoice</td>
<td>Header</td>
<td>List Creation</td>
<td>Approver</td>
</tr>
</tbody>
</table>

- Item Id: 155959
- Start Date: 28-Sep-2004
- End Date: 31-Dec-4712

Applicable Conditions:
- PO_MATCHED_INVOICE in (N)
- PROJECTRELATED_INVOICE in (N)
- SUPPLIER_INVOICE_AMOUNT is greater than or equal to 500 and less than or equal to 10000,USD

Actions:
- Require approvals up to the first superior.
Testing Workbench - Expand Approver List Details

- Approver List Details Expanded
  - Shows why this approver, Pat Stock, was selected

<table>
<thead>
<tr>
<th>Details Order Number</th>
<th>Approver Type</th>
<th>Approver</th>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Hide] 1</td>
<td>HR People</td>
<td>Stock, Pat</td>
<td>Approver</td>
<td></td>
</tr>
<tr>
<td>Item Class</td>
<td>Header</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item Id</td>
<td>155959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chain Number</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub List</td>
<td>Chain of Authority</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action Type</td>
<td>Supervisory level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>rule generated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source Rules</td>
<td>Simple Invoice between $500 and $10,000 Requires Manager Approval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Testing Workbench - Suppress Repeated Approvers

- Pat Stock is repeated (Supervisor and Project Manager)
- Repeated approvers are suppressed - Pat will only get approval request once
View Approval History from Invoice

- After initiation of approval
  
<table>
<thead>
<tr>
<th>Approval Context</th>
<th>Action Date</th>
<th>Line Num</th>
<th>Action</th>
<th>Approver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Approval</td>
<td>01-NOV-2007</td>
<td></td>
<td>Sent</td>
<td>Stock, Pat</td>
</tr>
<tr>
<td>Invoice Approval</td>
<td>01-NOV-2007</td>
<td></td>
<td>Future</td>
<td>Nichols, Nancy</td>
</tr>
</tbody>
</table>

- After Pat Stock approves

<table>
<thead>
<tr>
<th>Approval Context</th>
<th>Action Date</th>
<th>Line Num</th>
<th>Action</th>
<th>Approver</th>
<th>Amount Reviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Approval</td>
<td>01-NOV-2007</td>
<td></td>
<td>Sent</td>
<td>Stock, Pat</td>
<td>0.00</td>
</tr>
<tr>
<td>Invoice Approval</td>
<td>01-NOV-2007</td>
<td></td>
<td>Approved</td>
<td>Stock, Pat</td>
<td>6,000.00</td>
</tr>
<tr>
<td>Invoice Approval</td>
<td>01-NOV-2007</td>
<td></td>
<td>Sent</td>
<td>Nichols, Nancy</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Business Case 2 - Purchasing

- Requisition approvals are based on supervisor level approvals based on total requisition amount
  - 0 to 25K: 1 Supervisor
  - 25K to 50K: 2 Supervisors
  - 50K to 100K: 3 Supervisors
  - > 100K: 4 Supervisors
- New vehicle purchases must be approved by a director level
  - Directors have an approval authority job level = 5
- Pre-approvals are required for some requisitions based on item category
  - Computer PC and Server purchases must be pre-approved by the IT manager
Business Case 2 – AME

Components

• Transaction Type = Purchase Requisition Approval
• Attributes
  • None – attributes used in this rule are seeded
• New Conditions
  • ITEM_CATEGORY = AUTOMOTIVE.VEHICLE
  • ITEMCATEGORY in COMPUTER.{PC, SERVER}
  • REQUISTION_TOTAL – Create conditions for each range
• Approval Groups
  • IT Approver - approval group for IT purchases
• New Rules
  • Supervisor rules based on requisition total
  • Pre-Approval rule for computer purchases
  • Absolute Job Level rule for vehicle purchases
Business Case 2 - Conditions

- Item Category Conditions
  - Vehicle
  - Computer Equipment

<table>
<thead>
<tr>
<th>Condition</th>
<th>Item Class</th>
<th>Condition Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM_CATEGORY in (425.00, AUTOMOTIVE,VEHICLE)</td>
<td>Line Item</td>
<td>Ordinary</td>
</tr>
<tr>
<td>ITEM_CATEGORY in (COMPUTER,PC, COMPUTER,SERVER)</td>
<td>Line Item</td>
<td>Ordinary</td>
</tr>
</tbody>
</table>

- Requisition Total Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Item Class</th>
<th>Condition Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUISITION_TOTAL is greater than 100000,USD</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
<tr>
<td>REQUISITION_TOTAL is greater than 25000 and less than or equal to 50000,USD</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
<tr>
<td>REQUISITION_TOTAL is greater than 50000 and less than or equal to 100000,USD</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
<tr>
<td>REQUISITION_TOTAL is greater than or equal to 0 and less than or equal to 25000,USD</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
</tbody>
</table>
### Business Case 2 – Approval Group

- **Approval Group for IT Purchases**

<table>
<thead>
<tr>
<th>Details</th>
<th>Name</th>
<th>Description</th>
<th>Type</th>
<th>Order Number</th>
<th>Voting Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IT Approver</td>
<td>Approver required for all IT Purchases</td>
<td>Static</td>
<td>1</td>
<td>Serial</td>
</tr>
</tbody>
</table>

**Members**

<table>
<thead>
<tr>
<th>Name</th>
<th>Approver Type</th>
<th>Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockman, Pat</td>
<td>HR People</td>
<td>1</td>
</tr>
</tbody>
</table>
Business Case 2 – Rules

- Requisition Total Rules
  - Rule 1 shown
  - Rules 2-4 similar with different ranges and action
Business Case 2 – Rules

- Pre-Approval Rule for Computer Purchases

<table>
<thead>
<tr>
<th>Rules</th>
<th>Test Workbench</th>
<th>Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rule: Computer Purchases Rule**

- **Name**: Computer Purchases Rule
- **End Date**: 31-Dec-4712
- **Rule Type**: Pre List Approver Group
- **Item Class**: Header
- **Start Date**: 01-Nov-2007

**Conditions**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Condition Type</th>
<th>Item Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEMCATEGORY in (COMPUTER.PC, COMPUTER.SERVER)</td>
<td>Ordinary</td>
<td>Line Item</td>
</tr>
</tbody>
</table>

**Actions**

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-chain-of-authority approvals</td>
<td>Require pre-approval from IT Approver</td>
</tr>
</tbody>
</table>
Business Case 2 – Rules

- Set the Approval Authority Setup → Personnel → Jobs
- Absolute Job Level Rule for Vehicle Purchases

![Job Setup Window](image)

<table>
<thead>
<tr>
<th>Name</th>
<th>Vehicle Purchase Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule Type</td>
<td>List Creation</td>
</tr>
<tr>
<td>Item Class</td>
<td>Header</td>
</tr>
<tr>
<td>Start Date</td>
<td>01-Nov-2007</td>
</tr>
<tr>
<td>End Date</td>
<td>31-Dec-4712</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Item Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM_CATEGORY in (AUTOMOTIVE,VEHICLE)</td>
<td>Ordinary</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Type</td>
<td>Action</td>
</tr>
<tr>
<td>absolute job level</td>
<td>Require approvals up to at least level 5.</td>
</tr>
</tbody>
</table>
Business Case 2 – Test 1

- Create Requisition for New Car
  - Category = AUTOMOTIVE.VEHICLE – (need job level 5 or above approval)
  - Amount = $32K – (need approval from 2 supervisors)
Business Case 2 – Test 1

- Susan’s Supervisor is Pat Stock
  - Pat Stock’s Authority

- Pat Stock’s Supervisor is Casey Brown
  - Casey Brown’s Authority
Business Case 2 – Test 1

- Vehicle Purchase Rule and Amount Based Rule 2 apply
- Repeated Supervisors are suppressed
Business Case 2 – Test 2

- Create Requisition for Computer Purchase
  - Category = COMPUTER.PC – (need IT pre-approval)
  - Amount = $3K – (need approval from 1 supervisor)
Business Case 2 – Test 2

- Computer Purchase Rule applies
  - Pat Stockman from approver group
- Amount Based Rule 1 applies
  - Pat Stock (Susan Behn’s supervisor)
Business Case 3 – iRecruitment

Vacancy Approval

- A FYI Notification should be sent to the hiring manager when a requisition has been created on their behalf (i.e. Recruiter)
- Requisition is sent to the hiring manager’s VP for approval
  - If there is no VP then it should go to the Division Controller
- If VP approves requisition it goes to the Controller for this hiring manager
- If Division Controller approves it goes to the Hiring Manager’s SVP which is based on the people group
  - There may not be a SVP. If not, go to the next level
- If SVP approves it goes to the Hiring Manager’s EVP or CFO, COO or President also identified by the people group
Business Case 3 – iRecruitment Vacancy Approval

- In the Approvals Management Administrator Responsibility, create a new transaction type
Business Case 3 – iRecruitment
Vacancy Approval

- Create the transaction type with a unique key and name and go to the next page
Business Case 3 – iRecruitment Vacancy Approval

- Accept the defaults on Step 2 and go to page 3
Business Case 3 – iRecruitment Vacancy Approval

- Enter the following values
  - Workflow Item Key: `select item_key from hr_api_transactions where transaction_id = :transactionId`
  - Workflow Item Type: HRSSA
Business Case 3 – iRecruitment

Vacancy Approval

- Review and finish
Business Case 3 – iRecruitment Vacancy Approval

- Go to the Approvals Management Business Analyst Responsibility
- Query the new transaction type
Business Case 3 – iRecruitment

Vacancy Approval

- Define the components needed – attributes, conditions, action types, approver groups, rules
- Custom approver groups were used to determine the various VPs and controllers

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Desc</th>
<th>Usage Type</th>
<th>Order #</th>
<th>Voting</th>
<th>Dynamic Query</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXSB_IRC_HIRING_MANAGER</td>
<td>This group will contain the personId for the hiring manager of the vacancy</td>
<td>Dynamic</td>
<td>1</td>
<td>Serial</td>
<td>`select 'person_id'</td>
</tr>
<tr>
<td>XXSB_IRC_HIRING_MGR_VP</td>
<td>Hiring manager's Vice President</td>
<td>Dynamic</td>
<td>3</td>
<td>Serial</td>
<td>SELECT 'person_id'</td>
</tr>
</tbody>
</table>
### Business Case 3 – iRecruitment

**Vacancy Approval**

- Custom approver groups

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Desc</th>
<th>Usage Type</th>
<th>Order #</th>
<th>Voting</th>
<th>Dynamic Query</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXSB_IRC_DIVISION_CONTROLLER</td>
<td>Get the division controllers of the hiring manager</td>
<td>Dynamic</td>
<td>4</td>
<td>Serial</td>
<td>SELECT 'user_id'</td>
</tr>
<tr>
<td>XXSB_IRC_FINAL_VAC_APPROVAL</td>
<td>This group will contain the final approver list for vacancy approval</td>
<td>Dynamic</td>
<td>5</td>
<td>Serial</td>
<td>SELECT person_id FROM (( SELECT 'person_id'</td>
</tr>
</tbody>
</table>
Advanced Options – Custom Signing Limits

- All purchase requisitions must be approved by each employee in the supervisor chain until an employee is found with sufficient signing limit for the total requisition amount
  - Create an attribute to call a pl/sql function to return the number of levels from custom table
  - Create conditions for each level
    - SB_CUSTOM_APPRVAL_LEVEL = 1, 2, 3, ...
  - Create rules for each condition create
    - If SB_CUSTOM_APPROVAL_LEVEL = 1, then require approval from 1 supervisor level
Advanced Options – Custom Signing Limits

- Create an attribute to call a pl/sql function to traverse the hierarchy and return the number of approval levels.
Advanced Options – Custom Signing Limits

- Create conditions for each approval level
  - $SB_{\text{CUSTOM APPRVAL LEVEL}} = 1, 2, 3, \ldots$

<table>
<thead>
<tr>
<th>Condition</th>
<th>Item Class</th>
<th>Condition Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>$SB_{\text{CUSTOM APPROVAL LEVEL is equal to 1}}$</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
<tr>
<td>$SB_{\text{CUSTOM APPROVAL LEVEL is equal to 2}}$</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
<tr>
<td>$SB_{\text{CUSTOM APPROVAL LEVEL is equal to 3}}$</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
<tr>
<td>$SB_{\text{CUSTOM APPROVAL LEVEL is equal to 4}}$</td>
<td>Header</td>
<td>Ordinary</td>
</tr>
</tbody>
</table>
Advanced Options – Custom Signing Limits

- Create rules for each approval level
- If SB_CUSTOM_APPROVAL_LEVEL = 1, then require approval from 1 supervisor level

```
Rule: SB_CUSTOM_APPROVAL_LEVEL Level 1

<table>
<thead>
<tr>
<th>Name</th>
<th>SB_CUSTOM_APPROVAL_LEVEL Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule Type</td>
<td>List Creation</td>
</tr>
<tr>
<td>Item Class</td>
<td>Header</td>
</tr>
<tr>
<td>Start Date</td>
<td>02-Nov-2007</td>
</tr>
<tr>
<td>End Date</td>
<td>31-Dec-4712</td>
</tr>
</tbody>
</table>

Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Condition Type</th>
<th>Item Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB_CUSTOM_APPROVAL_LEVEL is equal to 1</td>
<td>Ordinary</td>
<td>Header</td>
</tr>
</tbody>
</table>

Actions

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisory level</td>
<td>Require approvals up to the first superior.</td>
</tr>
</tbody>
</table>
```
References

- Oracle Approvals Management Implementation Guide Rel 11i Part No. B25324-01, MetaLink Note 336901.1
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- About Oracle Approvals Management Minipack B, MetaLink Note 336004.1
The ABCs of Workflow for Oracle E-Business Suite Release 11i and Release 12

The Release 12 Primer – Shining a Light on the Release 12 World
Thank You!

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