

# 9 Human Workflow

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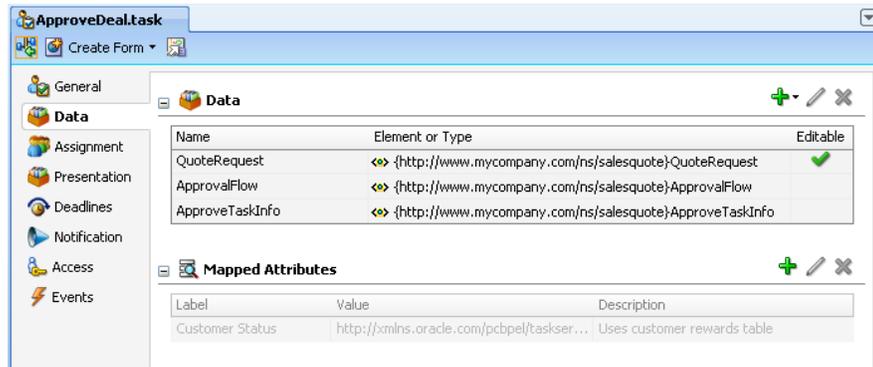
## 9.1 Implementing Approve Quote

### 9.1.1 Configuring the Human Task

In this section you add some complexity to the Human Task activity that was created earlier. Remember to save regularly.

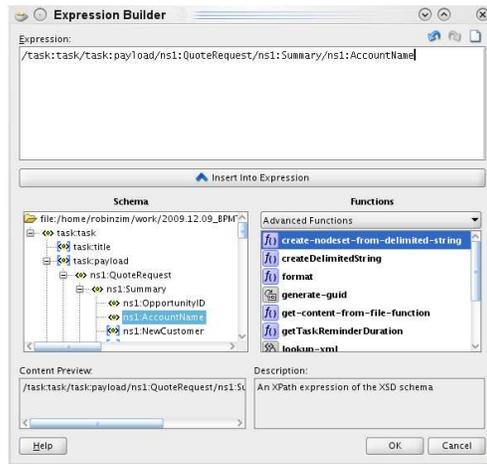
1. Open the **SalesQuoteProcess** composite in JDeveloper.
2. Double-click the **ApproveDeal** Human Task from the **Business Catalog** to open it.
3. Ignore the **General** tab for the moment and select the **Data** tab.
4. In the **Data** section, click the green plus (+) icon and select **Add other payload**.
5. In the **Add Task Parameter** dialog, make sure **Variable** is selected.
6. Select **Element**.
7. Click the browse icon on the right of the **Element** field.
8. Select **Quote.xsd > ApprovalFlow**, and click **OK**.
9. In the same way as just shown in steps 4 – 8, add the following element
  - Quote.xsd > ApproveTaskInfo

10. Your **Data** tab should look this:



The **Data** tab lets you specify the data that will be available to the Human Task. Typically the data listed here is what you want to expose to the end user in a task form. But it doesn't have to be. This data can be a superset and you can choose which fields the end user should see.

11. Select the **General** tab.
12. Select type of title to **Text and XPath**
13. Click the XPath editor button on the right of the **Task Title** field.
14. In the Schema section, expand task > payload > QuoteRequest > Summary and select AccountName and click the **Insert Into Expression** button to add it to the expression.

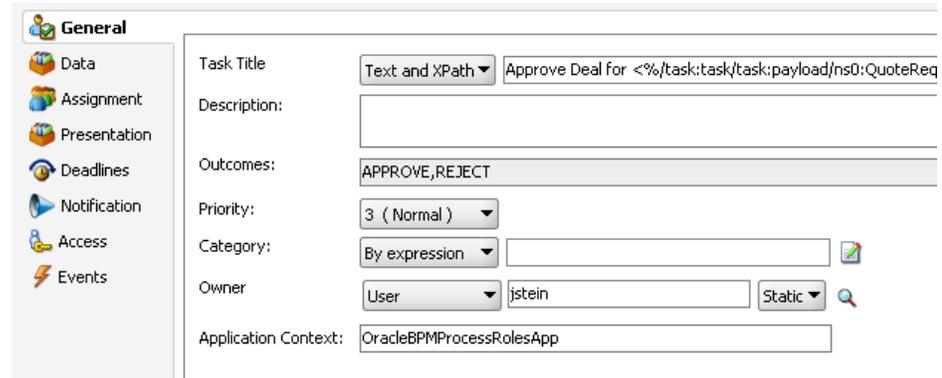


15. Click **OK**.
16. The **Task Title** field is now populated with a reference to that element. Click in the field and put the cursor at the front, and add "Approve Deal for " (no quotes) in the front. At runtime the variable will be replaced with the account name and say something like, "Approve Deal for Big Bank"



17. In the **Owner** field, select **User** from the drop down list.
18. Click the browse icon to the right of the **Owner** field to browse users and groups.

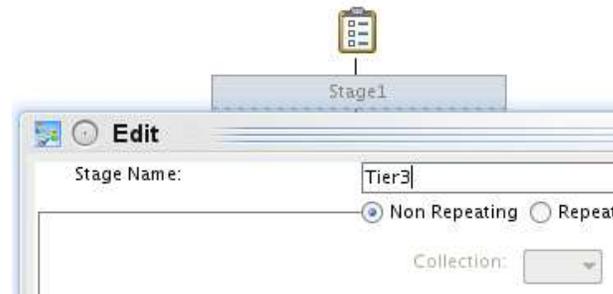
19. Make sure that the correct **Application Server** connection is selected. If you have your application server selected, the **Realm** field will have **jazn.com** selected.
20. Click the browse icon on the far right of the **Search Pattern** field and to search.
21. In the **Search User** field, choose **jstein** and click the **Select** button.
22. Click **OK**.
23. Your **General** tab should look like this:



The screenshot shows the 'General' tab of a configuration window. On the left is a sidebar with icons for Data, Assignment, Presentation, Deadlines, Notification, Access, and Events. The main area contains the following fields:

- Task Title:** Text and XPath (dropdown), Approve Deal for <?%/task:task/task:payload/ins0:QuoteReq
- Description:** (empty text box)
- Outcomes:** APPROVE, REJECT
- Priority:** 3 (Normal) (dropdown)
- Category:** By expression (dropdown), (empty text box), (browse icon)
- Owner:** User (dropdown), jstein (text box), Static (dropdown), (browse icon)
- Application Context:** OracleBPMPProcessRolesApp

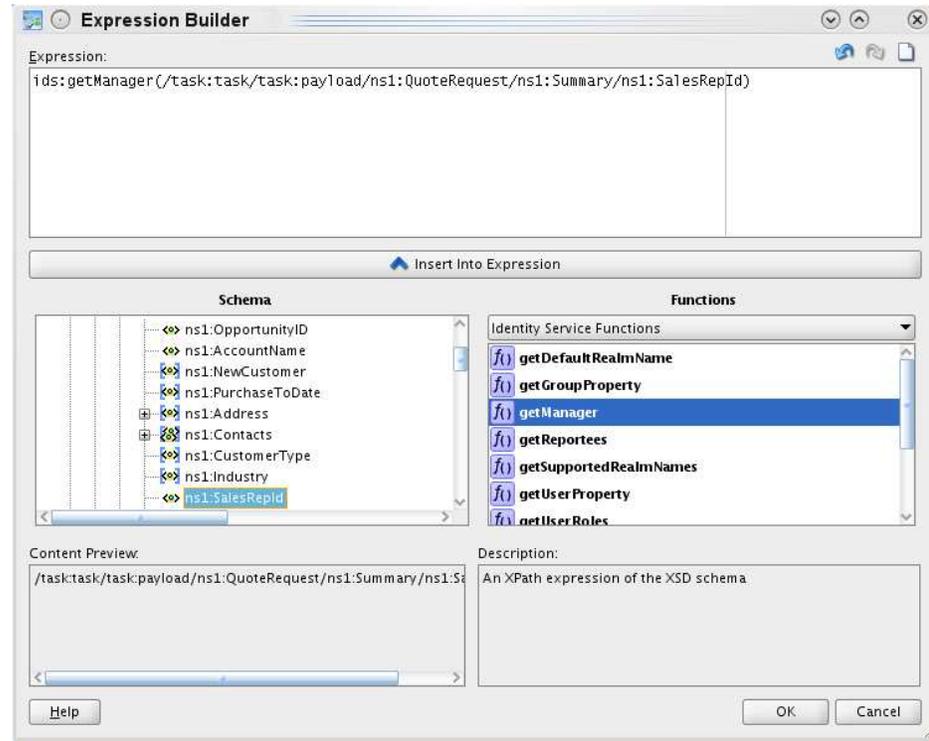
24. Select the **Assignment** tab.
25. Double-click stage name (e.g., Stage1) to edit the name.
26. Change it to *Tier3* and click **OK**.



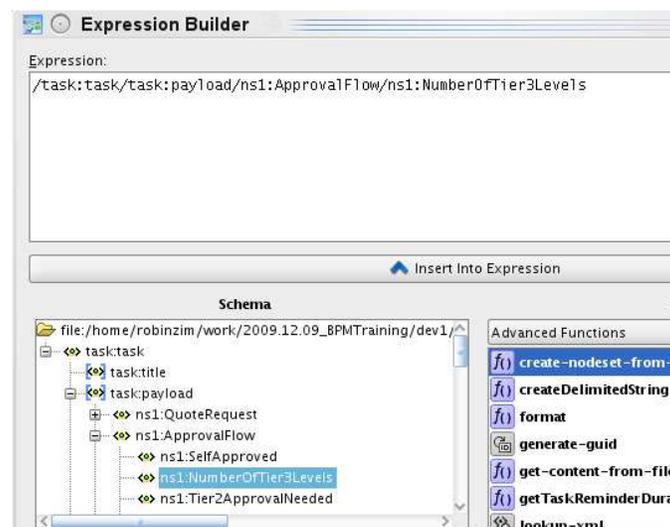
The screenshot shows the 'Edit' dialog for a stage. The 'Stage Name' field contains 'Tier3'. Below it are two radio buttons: 'Non Repeating' (selected) and 'Repeat' (unselected). At the bottom, there is a 'Collection' dropdown menu.

27. Click the **Participant** box (with the person icon) to select it.
28. Click the **Edit** button next to the green plus icon. Alternatively you can double-click the **Participant** box to edit it.
29. Specify the following values:
  - **Type:** Serial
  - **Label:** *Sales Management*
  - **Build a list of participants using:** Management Chain
  - **Specify attributes using:** Value-based
30. In the **Starting Participant** box, click the green plus icon and select **Add User**.
31. In the **Data Type** field, select **By Expression**.
32. Click the "..." button in the **Value** field.
33. In the **Expression Builder**, change the **Functions** poplist to **Identity Service Functions**.
34. Select **getManager** and click the **Insert Into Expression** button to add it.

35. In the **Expression** field, put the cursor between the parentheses.
36. In the **Schema** section, select **task > payload > QuoteRequest > Summary > SalesRepId** and add it to the expression.



37. Click **OK**.
38. Back in the **Edit Participant Type** dialog, change the **Number of Levels** to **XPath**.
39. Click the **Expression Builder** icon to the right of the **Number of Levels** field.
40. From the **Schema** field, select **task > payload > ApprovalFlow > NumberOfTier3Levels** and add it to the expression. This value is set at runtime.



41. Click **OK**.

42. The **Edit Participant Type** dialog should look like this:

**Edit Participant Type**

Type: Serial Label: SalesManagement  
e.g., Approval Manager

Participant List

Build a list of participants using: Management Chain

Specify attributes using:  Value-based  Rule-based

Identification Type	Data Type	Value
User	By Express...	ids:getManager(/task:task/task:payload/ns0:Ql...

Top Participant: By Title

Number of Levels: XPath ns0:ApprovalFlow/ns0:NumberOfTier3Levels

43. Click **OK** to return to the Human Task.



44. Click the **Tier3** box to select it. Then click the green plus icon and select **Sequential Stage** to add a new one.

45. Double-click the new stage name (e.g., **Stage1**) and rename it to **Tier2**.

46. Double-click the **Edit Participant** box to open it.

47. Specify the following values:

- **Type:** Parallel
- **Label:** *Tier2 Approvers*
- **Voted Outcomes > Value:** 100
- **Default Outcome:** APPROVE
- **Wait until all votes are in before triggering outcome:** Selected
- **Build a list of participants using:** Names and expressions

- **Specify attributes using:** Value-based
- Click the green plus icon in **Participant List** and specify:  
**Identification Type:** User  
**Data Type:** By Expression  
**Value:** /task:task/task:payload/ns0:ApprovalFlow/ns0:Tier2Approvers  
 (Use the Expression Builder because your namespace might be different)

Type: Parallel Label: Tier2Approvers  
e.g., Approval Manager

**Vote Outcome**

A Voted outcome will override the default outcome if the required percentage is reached. Outcomes will be evaluated in the order listed in the table.

Voted Outcomes	Outcome Type	Value
Any	By Percentage	100

Default Outcome: APPROVE

Immediately trigger voted outcome when minimum percentage is met  
 Wait until all votes are in before triggering outcome  
 Share attachments and comments

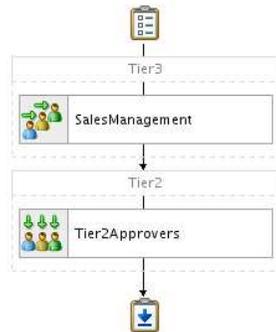
**Participant List**

Build a list of participants using: Names and expressions

Specify attributes using:  Value-based  Rule-based

Participant Names	Identification Type	Data Type	Value
	User	By Expression	/task:task/task:payload/ns0:ApprovalFlow/ns0:Tier2Approvers

48. Click **OK**.



49. Click the **Tier2** box to select it. Then click the green plus icon and select **Sequential Stage** to add a new one.
50. Double-click the new stage name (e.g., **Stage1**) and rename it to **Tier1**.
51. Double-click the **Participant** box to open it.
52. Specify the following values:
  - **Type:** Single
  - **Label:** *Tier1.Participant1*
  - **Build a list of participants using:** Approval Groups
  - **Specify attributes using:** Value-based
  - **Name:** *Tier1ApprovalGroup* (you create this group later in the lab)

Type:  Single Label:

e.g., Approval Manager

---

Participant List

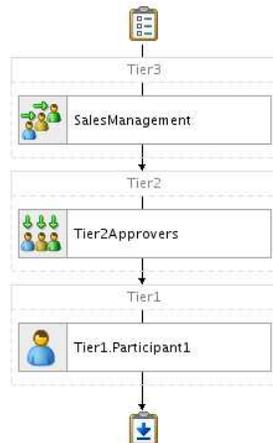
Build a list of participants using:

Specify attributes using:  Value-based  Rule-based

Name:

Allow Empty Groups

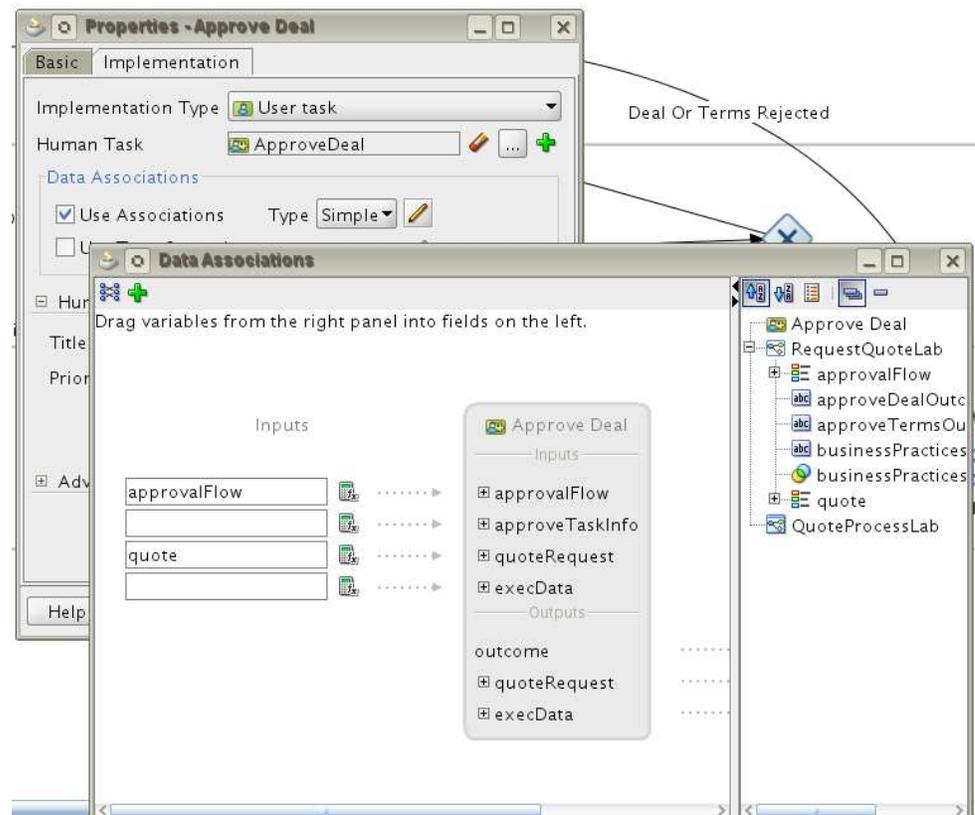
53. Click **OK** and close the task definition window.



## 9.1.2 Adding a data assignment

As one of the first steps of this lab exercise, you added two more data items, namely **ApprovalFlow** and **ApproveTaskInfo** to the task definition. The task flow in this human task uses values from the ApprovalFlow data item which are set by the business rules activity earlier in the process. You need to update the **Approve Deal** task activity in the process to assign these values

1. Open the BPM process from the BPM Navigator
2. Double-click the **Approve Deal** activity to open the properties window.
3. Navigate to the implementation tab
4. Edit the data association to add the approvalFlow as one of the inputs



## 9.1.3 Deploy the application

Deploy the application. You can do this in the Application Navigator and deploy the **QuoteProcessLab** project. See the steps in 03-salesquote-implementation for a refresher on how to deploy.

## 9.2 Running

### 9.1.4 Creating the approval group

Before you can instantiate a new process, you need to create a new approval group called **Tier1ApprovalGroup**. Recollect that you defined the Tier 1 approval based on approval groups and defined the group name as **Tier1ApprovalGroup**. This group needs to be created and members added to it using the BPM Workspace.

Using the BPM Workspace you create a new group and add one member **cdoyle** to it. The following steps will guide you through setting up this new group

1. Log in to the BPM Workspace as **webllogic**
2. Click on the **Administration** link at the top of the page



3. In the **Administration Areas** panel on the left, click on **Approval Groups**.
4. In the Approval Groups panel click on the button next to the + icon and select **Create Static**

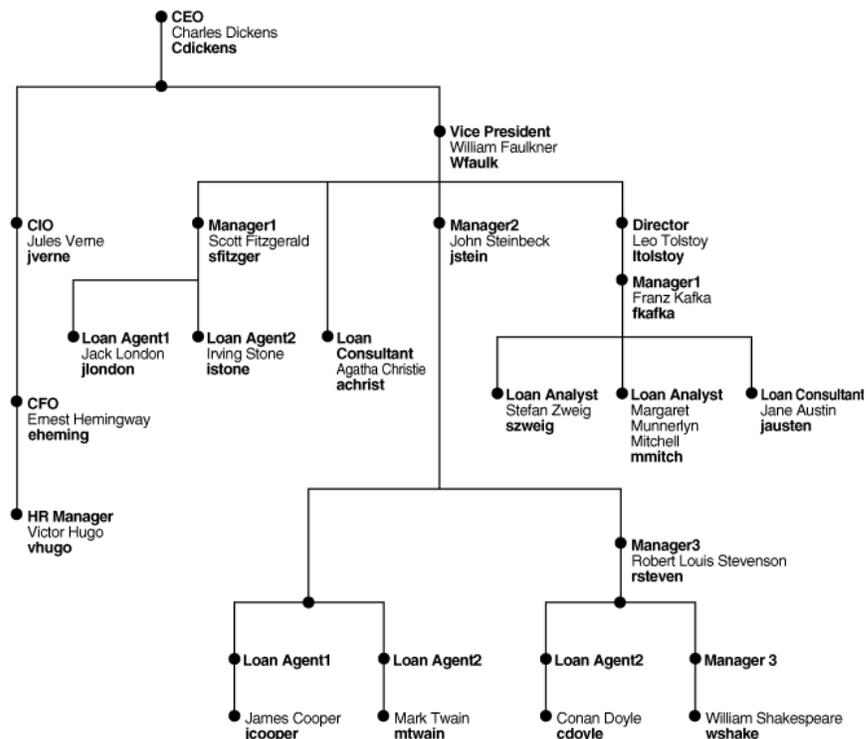


5. Enter **Name** in the **Details** panel as *Tier1ApprovalGroup*
6. Click on the + to add member *cdoyle* to this static group.
7. Click **Apply**

## 9.1.5 Hierarchy of users

You may find it useful to refer Figure 1 during the lab. It shows the demo users and how their managers are. For example, the manager of *jcooper* is *jstein*.

**Figure 1: Hierarchy of demo community users**



## 9.1.6 Instantiate a new process

Now you will run a new instance to see the effects of the business rules on the human workflow approvals.

1. Open Workspace in a browser: `http://hostname:7001/bpm/workspace`. Login as **jcooper/welcome1** (or port 7001 if you do not have a managed server).
2. Select the **Process Tracking** tab.
3. From the **Applications** portlet, click **RequestQuoteLab v2.0**. (Or whatever version you just deployed)
4. When the **Enter Quote** screen appears, specify the following fields:
  - **Account Name:** Change this from **Acme New** to something memorable and unique to you. e.g., My Cool Company. If you use a different name each time you run it will be easier to tell the tasks apart later during the approval steps. It will also differentiate them if you happen to be running in share environment when many people are sharing the same demo users.
  - **Sale Rep Id:** vhugo
  - **Sales Rep Name:** Victor Hugo
  - **Industry:** Media
  - **Total Net Revenue:** 275000 this value causes the right rule result for this test
  - **Effective Discount:** 0.94 this value causes the right rule result for this test

Quote Request - Summary	
Opportunity ID	zzzz2
Account Name	Big Corp
New Customer	
Purchase To Date	
Customer Type	
Industry	Media
Sales Rep Id	vhugo
Sales Rep Name	Victor Hugo
Sales Rep Contact	
Valid Until	May 30, 2010
Total Net Revenue	275000
Effective Discount	0.94

5. Click the **Submit** button (on the upper-right).

According to the business rules, a business practices review is needed. According to the BPM diagram, business practices reviews need to be approved by the Business Practices role, which is jstein.

6. Logout from BPM Workspace and re-login as jstein/welcome1.
7. There should be a task called **Business Practices Review** in the inbox. Click on it and in the details you should see the Account Name and other details that you entered earlier.
8. Click the **Approve** button.

From the BPM diagram, there are now two approval steps: Approve Deal and Approve Terms. Let's look at Approve Deal first.

In the lab you just completed, you implemented Approve Deal and gave it three assignees. The first assignee is a management chain that goes up a certain number of levels as specified by the business rules. For a deal size of \$275,000 and effective discount of 94%, NumberOfTier3Levels is set to 2. So the next approval is vhugo's manager, and then 2 managers above them.

From Figure 1 on page 9, you can see that vhugo's manager is eheming, whose manager is jverne, whose manager is cdickens.

9. Logout from BPM Workspace and re-login as eheming/welcome1.
10. There should be a task called **Approve Deal for BigCorp** (or whatever you named your account) in the inbox. Click on it and in the details you should see the Account Name and other details that you entered earlier.
11. Click the **Approve** button.
12. Logout from BPM Workspace and re-login as jverne/welcome1.
13. There should be a task called **Approve Deal for BigCorp** (or whatever you named your account) in the inbox. Click on it and in the details you should see the Account Name that you entered earlier.
14. Click the **Approve** button.
15. Logout from BPM Workspace and re-login as cdickens/welcome1.
16. There should be a task called **Approve Deal for BigCorp** (or whatever you named your account) in the inbox. Click on it and in the details you should see the Account Name and other details that you entered earlier.
17. Click the **Approve** button.

That completes the first assignee of Approve Deal. The second assignee is Tier2 approvers. According to the business rules, the Tier2 approver is wfaulk.

18. Logout from BPM Workspace and re-login as wfaulk/welcome1.

wfaulk will actually have two tasks. That's because he's the approver for the second assignee of the Approve Deal, but is also the approver for Approve Term, which is assigned to the **Contracts** role, which wfaulk is a member of.

19. There should be a task called **Approve Deal for BigCorp** (or whatever you named your account) in the inbox. Click on it and in the details you should see the Account Name that you entered earlier.
20. Click the **Approve** button.
21. Since we're here, we can approve the other task which is for the same instance.
22. Select **Approve Terms** task and approve it.

Now we are up to the third assigned of the Approve Deal task, which is assigned to the **Tier1ApprovalGroup** role. Earlier in the lab you created this role and made cdoyle a member.

23. Logout from BPM Workspace and re-login as cdoyle/welcome1.
24. There should be a task called **Approve Deal for BigCorp** (or whatever you named your account) in the inbox. Click on it and in the details you should see the Account Name that you entered earlier.
25. Click the **Approve** button.

From the BPM diagram, the both Approve Deal and Approve Terms are now complete. So the process flow has moved to **Finalize Contracts**. The contract approver is wfaulk.

26. Logout from BPM Workspace and re-login as wfaulk/welcome1.
27. There should be a task called **Finalize Contracts** (or whatever you named your account) in the inbox. Click on it and in the details you should see the Account Name that you entered earlier.
28. Click the **OK** button. (Remember the outcome was set to OK instead of Accept/Reject.)
29. The process is now complete. You can logon to Enterprise Manager (e.g., <http://localhost:7001/em>) and see the instance is complete.
30. Click the **ApproveDeal** Human Workflow Component link to see the task progression through the different approvers.

#### Trace

Click a component instance to see its detailed audit trail.

Show Instance IDs

Instance	Type	State
 RequestQuoteLab	Service	✔ Completed
 RequestQuoteLab	BPMN Component	✔ Completed
 EnterQuoteDetails	Human Workflow Component	✔ Completed
 ApprovalRules	Decision Service Component	✔ Completed
 BusinessPracticesReview	Human Workflow Component	✔ Completed
 ApproveTerms	Human Workflow Component	✔ Completed
 ApproveDeal	Human Workflow Component	✔ Completed
 FinalizeContracts	Human Workflow Component	✔ Completed
 SaveQuote	Reference	✔ Completed

### 9.1.7 Other scenarios

You can run other scenarios by seeing the options in the business rules. For example, create an instance with an effective discount of higher between 0.3 and 0.6, or greater than 0.9, or with revenue higher than 150,000, or over 550,000 etc.

This is left as an exercise for the reader.