

Supported Version: Oracle BAM 10.1.3

Objectives:

This document describes report navigation features. The end user can be given control to navigate from one report to another (this is called drill across). This navigation across reports can be context sensitive (based on a business content) or unconditional. Filters help design these context sensitive navigation. End user can also be given visibility into the report data, and drill into the data set for more visibility. (this is called as 'drill into') of reports to view the data representing the graphical view. The drill into feature can be either enabled or disabled during design time, and the drilled into information set can also be controlled, and only selected fields displayed to end user. Another powerful feature of reports is ability to provide context sensitive driving within a report, i.e., business information from one view can drive the results of another view. (this is called driving views). Views can also be changed by use of dimensions & hierarchy on data objects.

Prerequisite:

You should have completed all the steps described in previous tutorial documents. This document uses the BPEL OrderBooking Tutorial for example and building business dashboards.

Steps Explained:

- Extending the reports to navigate across report views, based on variables selected.
- Drill across and drill down features. (year/month/ based drill down)
- Drive views inside the reports.
- Display data with time grouping.
- Extending navigation across dataobjects and across reports.

Extending the Reports for “Drill Across”

Open the Active Studio from the IE Oracle BAM browser page, <http://localhost/OracleBAM>

This exercise will expand the previously build 3 reports to represent clear data, based on conditions, and also facilitate navigation between reports & navigation within a report.

Designing Reports for Navigation

Drill-Across Navigation: Move between reports based on user selected value, and the target report would display values satisfied conditions based on input filter (navigation built)

Drill-Into Navigation: Move into the same report for more detailed display based on “current report attribute”. The refreshed report would display only a subset of values satisfied by the drilled into condition.

Navigation #1

Start Active Studio. Open the “Orders By Status” report. Click on “Edit” link (under the “Actions” menu) to edit the report.

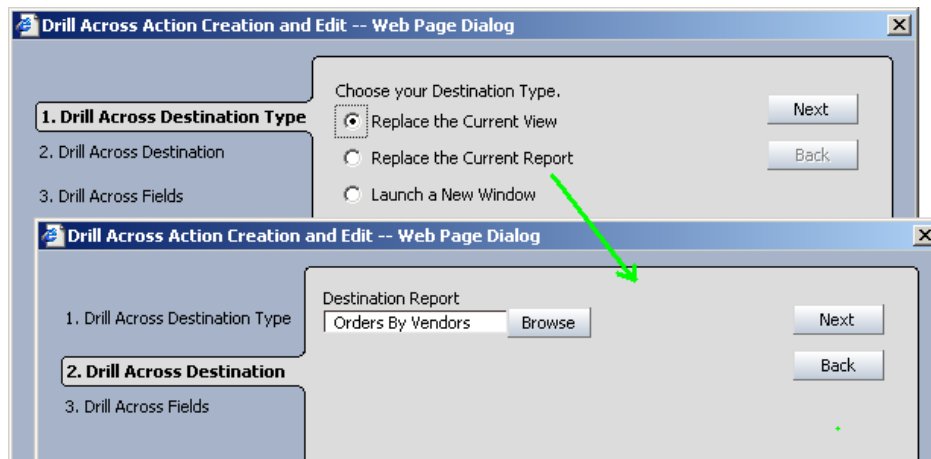
Click on “Edit view” link to edit the 3-D PieChart view. In the DataObject panel, click on “Drilling” Tab.

Verify that the “Default Drill Action” is not selected. Deselect “Enable Drill Through”. (Why ? This is a 3-D pie chart and these actions do not look attractive, hence not recommended cosmetically).



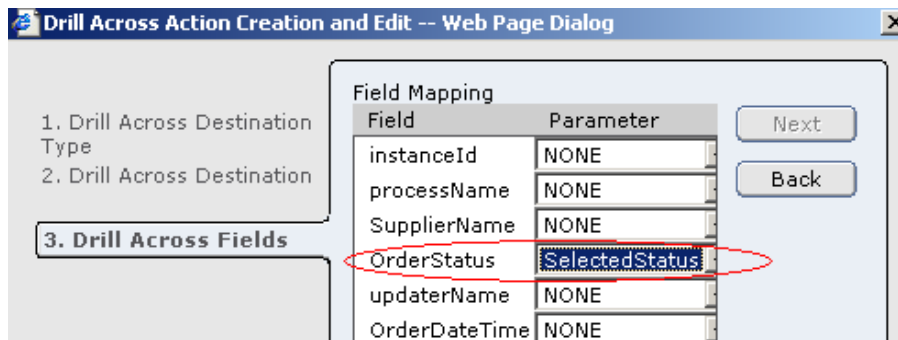
Click on “New Target”. Set the target report as follows:

- Replace the current report
- Click Next
- Select target report as “Orders By Vendors”
-



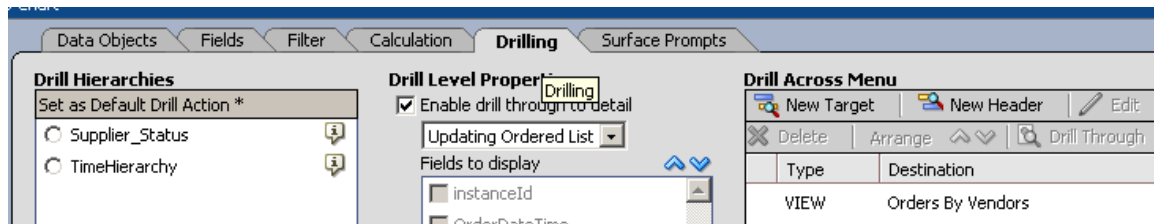
- Click Next
- Set the mapping fields between the two reports as: OrderStatus = SelectedStatus.

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- Click OK to save the drill across properties.

This completes the drill across feature. The navigation between Orders By Status and Orders By Vendors is now based on user selection of “order status”. Verify in run phase.



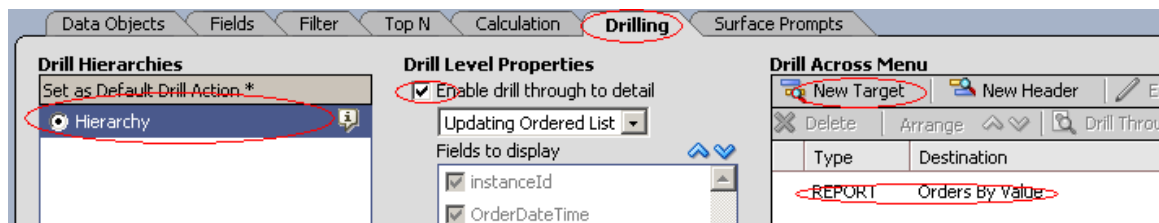
Click on “OK” and save & close this report.

Navigation #2

Open “Orders By Vendor” Report for editing and edit the 3-D BarChart view. In the DataObject panel, click on “Drilling” Tab.

Enable “Default Drill Action” and “Enable Drill Through”.(Why ? This is a 3-D bar chart, the timing period can be cleanly displayed for added information in this chart and it looks attractive cosmetically and feature rich).

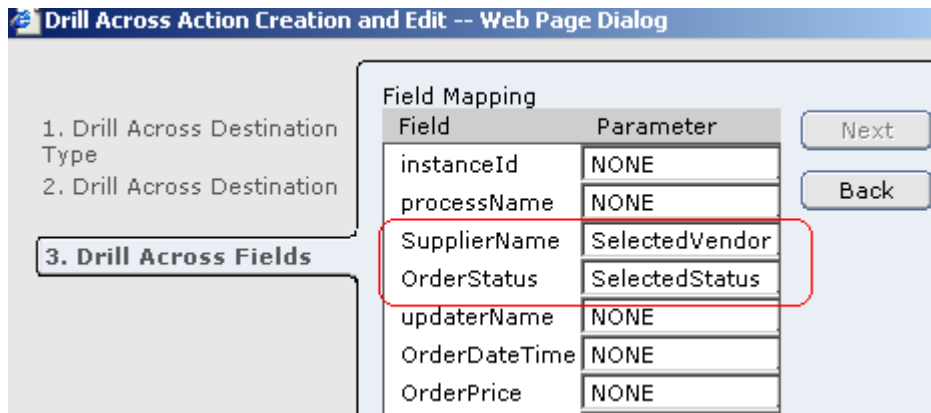
In the drill through feature, select the fields to display in the required order as shown. (Change the order using the UP/Down arrows)



Click on “Drill Across”, add “New Target”. Set the target report as follows:

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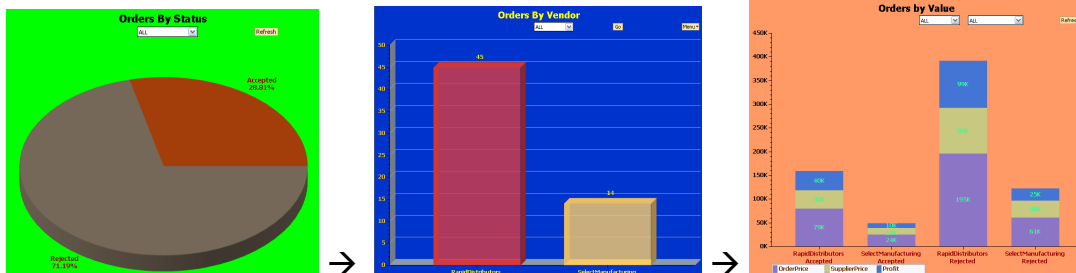
- Replace the current report
- Select target report as “OrdersByValue”
- Set the mapping fields between the two reports as:
 OrderStatus = SelectedStatus.
 SupplierName = SelectedVendor
- Click on “OK” and then on “Apply” to save the drill across properties.
-



This completes the drill across feature. The navigation between Orders By Status and Orders By Vendors is now based on user selection of TWO fields “order status” and “supplier name”. Verify in run phase. Click on “OK” and save & close this report.

Running Reports and Verification

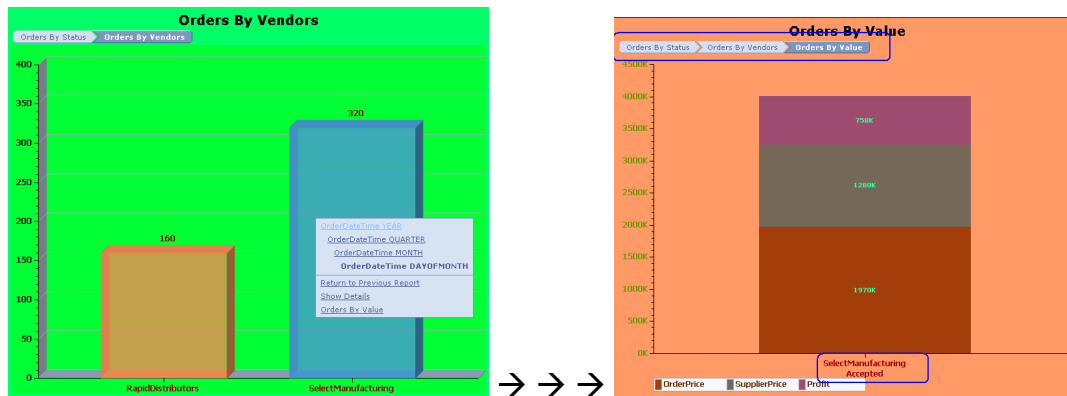
View the individual reports and verify that data is presented “unconditionally”. Click on the report & select “View”. Verify that all three reports are displayed as below, with complete “ALL” data. Close all the reports after viewing.



Verifying Navigation #1

Open OrderByStatus report and view its report. Right click on the Pie Chart sector (example- Accepted area), and select “OrdersByVendors”. This will now “Navigate” across Reports with “conditional” data, and the new report will display only “Vendors for “Accepted” orders.

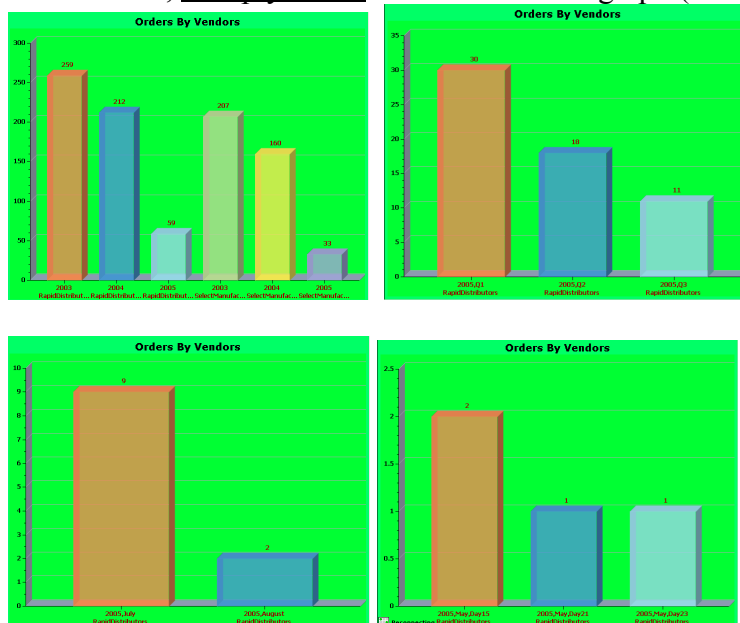
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On the “OrdersByVendors” graph, right click on the graph (example – Selected Manufacturing) and select “OrdersByValue”. The report will display only the data for the conditions satisfied (two conditions : OrderStatus & SupplierName) as above.

Verifying Navigation #2

To verify drill through feature, open the OrdersByVendor report, and right click on the report – select “OrdersDateTime=Year”. It will display the report “sorted” by Year as below. Next, “simply” click on one of the bar graph (example –2005 RapidDistributors)



It will display a “Drilled Down” version of the data for the “selected time” period. Again, just click on one of the 3D bar-graphs (example –Q2) and the report will drill further down to the individual months for this time period. Next click on the month to drill down into the individual month report (example: May).

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Next, click on individual day bar, to show the details of that order.
Close all the graphs and close active report window.

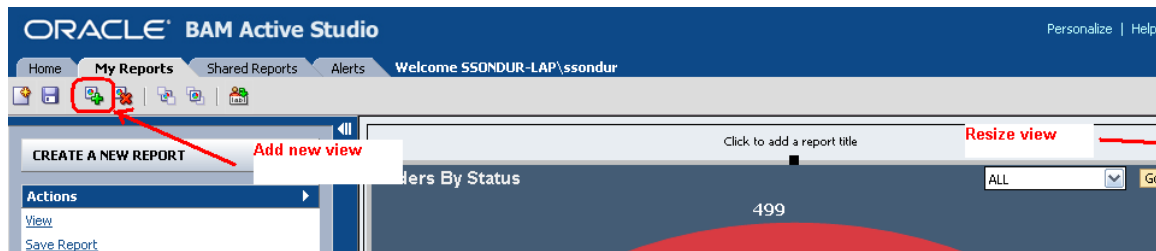
This completes the drill through & drill across exercise.

Advanced Navigation

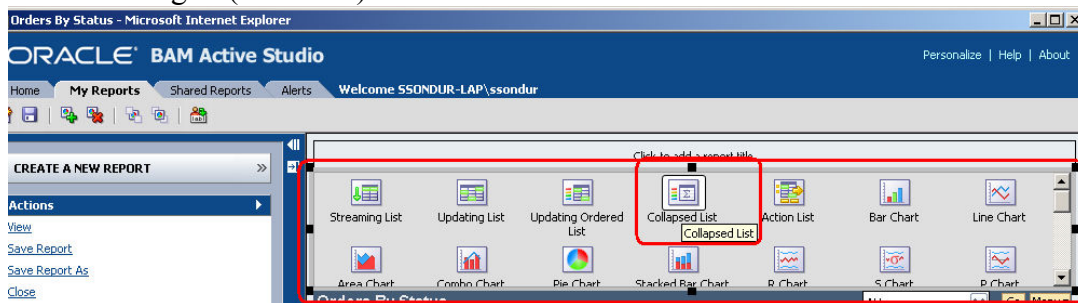
Driving (Driving views inside reports)

In this section, we demonstrate the ability to “drive” the contents of the report from one view to another (within the same report).

Start Active Studio. Open the “Orders By Status” report. Click on “Edit” link (under the “Actions” menu) to edit the report. Resize the 3-D Pie Chart using the boundaries as shown, and reduce it to approp. 2/3rd screen height & 2/3rd screen width (as shown)
Add a new view into this report, by selecting the ‘add view’ option. (as shown)



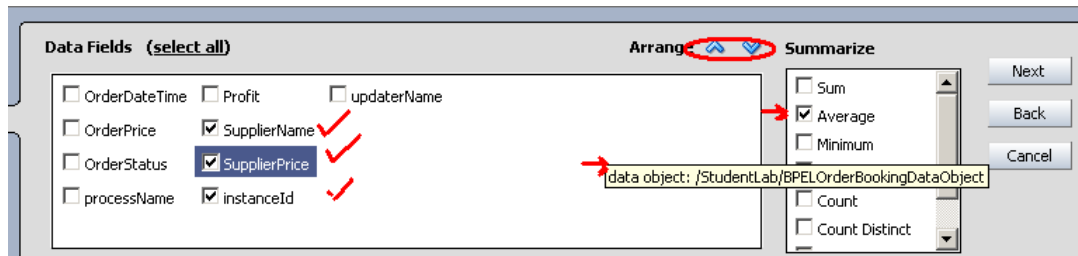
Add a new view type called “Collapsed View”, and resize it to the window width and available height. (as shown)



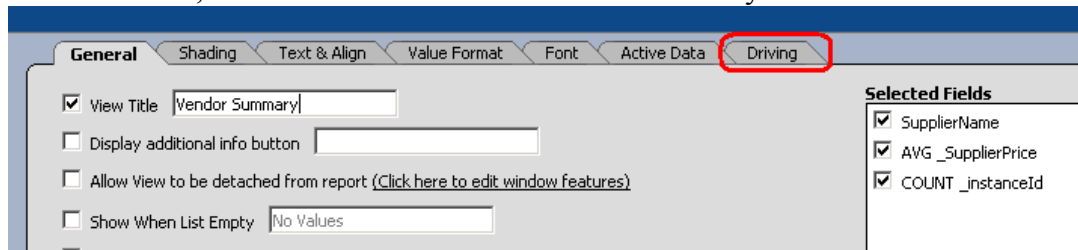
In the “Collapsed List” edit box, select the data object as “StudentLabs folder” and “BPELOrderBookingDataObject”. Select the attributes as: (in this order): SupplierName, SupplierPrice, and instanceId.

Set “summarize” – SupplierName (none), instanceId for ‘Count’, and SupplierPrice for ‘Average’

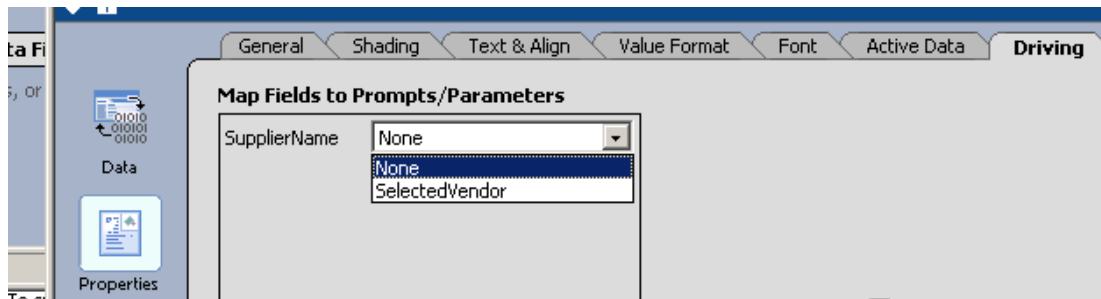
Tutorial: Oracle BAM - Report Navigation (Tutorial_9_BAM_ReportNavigation.doc)



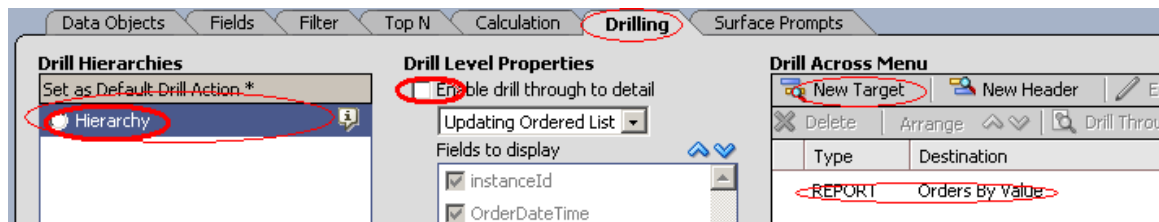
Click on “Next”, Select “Change View Properties”, In the properties sheet, select “General” Tab, and set the view title as “Vendor Summary”.



Next, click on “Driving” tab, set the driving properties mapping “SupplierName” to filtered data “SelectedVendor”.



Next select the “data sheet, and select the drilling tab, and turn off all selections. (as shown in drill hierarchies, and drill level properties)



Click on “OK” and click on “save” to save this report (do not close report). Note –we are keeping this view simple without any formatting or beautification.

Grouping By Time Slice:

In this section, we demonstrate the grouping of parameters on a “time –scale”. Add a new view into this report, by selecting the ‘add view’ option. (as shown). Add a new “Bar Chart” and resize the area to the right 1/3rd of screen to fit the remaining area (as shown).

The screenshot shows the 'Group By' and 'Chart Values' sections of the Oracle BAM report configuration interface. The 'Group By' section has a list of fields: OrderDateTime (checked), instanceId, OrderStatus, processName, and SupplierName. The 'Chart Values' section has a list of fields: instanceId (checked), OrderPrice, OrderStatus, processName, and Profit. The 'Time Groups' section has options for 'Use time series' (selected) and 'Use time groups'. The 'Time Unit' is set to 'Minute' and the 'Quantity' is set to '30'.

Select the data object as “/StudentLab/BPELOrderBookingDataObject” and select the group by field as “OrderDateTime”. Since this is of date/time format, a new display with “Time Groups” is shown. Select “Use Time Series”, “Continuous Time Series”, and select time unit as “Minute” –Quantity – 30. Next –select the “Chart Value” as “instanceId” and summarize –“count”. Click on “Next”.

Select the “View Properties” sheet, and set the view title as – “Hourly Orders”. Click “Apply” – this will show the hourly orders in the view. Select the “Value Format” tab, and set the OrderDateTime to “TimeUnit” and Type – “Hour,Minute”. Click on Apply. This will format the non-data axis (X-axis) to hh:mm format and show clear content.

The screenshot shows the 'Value Format' tab of the Oracle BAM report configuration interface. The 'Apply To' field is set to 'OrderDateTime'. The 'Value Substitution' section has options for 'Zero' and 'NULL'. The 'Category' list includes: General, Number, Percent, Currency, Timestamp, Time, Date, and TimeUnit (selected). The 'Type' list includes: Hour, Minute, Second, Day of Year, Hour, Day of Year, Hour, Minute, Day of Year, Hour, Minute, Second, Hour, Minute (selected), and Hour, Minute, Second.

To make this view more view-friendly (to avoid cluttered data) – select the “data” sheet, and select “filter” and “add new entry” to set the “OrderDateTime” to previous 3 hours. (with active now checked). This will show only data for last 3 hours.

The screenshot shows the 'Filter' tab of the Oracle BAM report configuration interface. The 'Filter Expression' section has fields for 'field' (OrderDateTime), 'Comparison' (is within a time interval), 'type' (previous), 'unit' (3), and 'unit' (Hours). The 'Active Now' checkbox is checked. A note below states: 'Active Now updates this filter entry as the current time changes.'

Tutorial: Oracle BAM - Report Navigation

(Tutorial_9_BAM_ReportNavigation.doc)

Next, create another filter to map field –SupplierName ‘equal to’ SelectedVendor (earlier defined prompt).

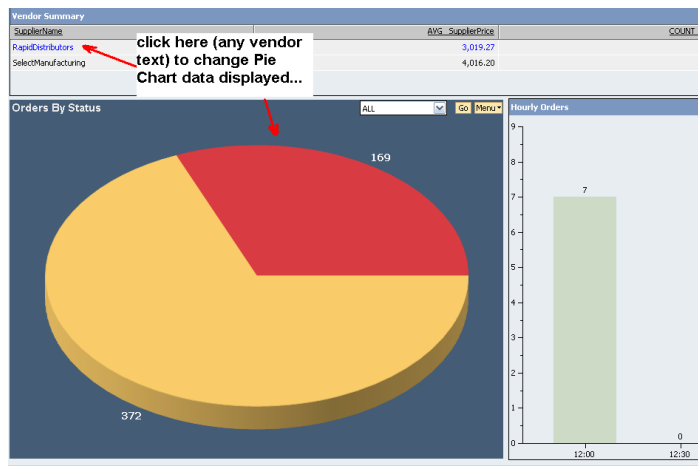
Save the report and Close this report. This completes the report definition.

Viewing the report:

Open Oracle BAM console and ActiveViewer. Select the report “StudentLab/Orders By Status” and view this report. Initially the pie-chart, and the summary chart and the time grouped bar graph will show the complete data set.

Click on any selection in the “Vendor Summary”, (select any text displayed) and observe the Pie Chart show the selected data set for “selected vendor”. (picture below). This user control is called “Driving Views”.

Also observe the orders grouped by time (in 30 min intervals).



Summary

After finishing this exercise, students would have completed:

- Extending the reports to navigate across report views, based on variables selected.
- Drill across and drill down features. (year/month/ based drill down)
- Drive views inside the reports.
- Display data with time grouping.
- Extending navigation across dataobjects and across reports.

Questions & Clarifications:

If you have any comments or need additional information, please communicate through the Oracle BAM forum at: <http://forums.oracle.com/forums/forum.jspa?forumID=252>