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- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send comments to us in the following ways:

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  USA

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If you have problems with the software, please contact your local Oracle Support Services.
Preface

This user guide is the primary reference for Release 11i of Oracle ABM Analyzer. It contains detailed discussions of product features and functions, plus procedures, case studies, and examples.

The preface explains how the user guide is organized and introduces other sources of information.

Product Overview

Oracle ABM Analyzer is a relational online analytical processing (OLAP) reporting and analysis application. It was created specifically for activity-based management (ABM) and works in conjunction with Oracle Discoverer tools. ABM Analyzer enables users throughout an organization to easily generate multidimensional, custom reports without writing code.

ABM Analyzer is part of Oracle Applications is an integrated suite of more than 45 software modules for financial management, supply chain management, manufacturing, project systems, human resources, and sales and service management.

Intended Audience

This guide is intended for system administrators, database managers, consultants, and other users of ABM Analyzer.
How the User Guide is Structured

This book is divided into the following chapters. There is also an index.

**Chapter 1**
Chapter 1 provides a brief introduction to ABM Analyzer, ABM, and Discoverer.

**Chapter 2**
Chapter 2 discusses how to use, create, copy, and customize ABM Analyzer workbooks.

**Chapter 3**
Chapter 3 describes the four standard workbooks available in ABM Analyzer.

**Chapter 4**
Chapter 4 explains how to add ABM attribute folders to a worksheet.

**Chapter 5**
Chapter 5 explains how to secure ABM data and limit access to secured ABM objects.

Assumptions

It is assumed that you have the requisite knowledge and skills for your business area. If you are an administrator, you are familiar with the Discoverer Administration Edition. If you are a user, you are familiar with activity-based management, Oracle ABM, and the Discoverer User Edition.

Related Documents

The following are reference materials for products related to ABM Analyzer:

**Oracle Activity-Based Management User Guide**
This guide covers activity-based management, setting up activities and cost objects, flex-budgeting, and standard reports.
Oracle Discoverer User Guide
This guide explains how to use Discoverer to access, view, and analyze data in your database, and how to produce reports.

Oracle Discoverer User Tutorial
This tutorial helps the user to quickly learn Discoverer.

Oracle Discoverer Administration Guide
This guide enables database administrators to prepare database data in a manner that facilitates use.

Oracle Activity-Based Management Installation Guide
This guide explains how to install ABM, ABM Analyzer, and SEM Exchange.

Oracle Discoverer Installation and Upgrade Guide
This guide contains instructions for installing Discoverer, the demonstration database, and the tutorial examples. It also describes how to migrate existing Discoverer/2000 End-User Layer to the latest version of Discoverer.

Modifying Oracle Applications Data
It is strongly recommended that you use only Oracle Applications to modify table data within Oracle Applications. There are at least three reasons for this. First, Oracle Applications tables are interrelated, and revising one table causes related tables to be updated automatically. Second, the system reviews your changes to ensure their validity. Third, the system keeps track of who made the changes and when they were made.

If you enter information into database tables using database tools, you risk storing invalid information. Also, you cannot track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Caution: Oracle strongly recommends that you never use SQL*Plus or any other tool to modify Oracle Applications data unless otherwise instructed.
The following conventions are used in this book:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>.</td>
<td>Vertical ellipsis points in an example mean that information not directly related to the example has been omitted.</td>
</tr>
<tr>
<td>. .</td>
<td>Horizontal ellipsis points in statements or commands mean that parts of the statement or command not directly related to the example have been omitted.</td>
</tr>
<tr>
<td>boldface text</td>
<td>Boldface type in text indicates a term defined in the text, the glossary, or in both locations.</td>
</tr>
<tr>
<td>italic text</td>
<td>Italic type indicates a term defined in the text, the glossary, or in both locations. It can also represent a variable and be used to provide emphasis.</td>
</tr>
<tr>
<td>Menu name &gt; Command</td>
<td>Text in this format conveys a sequence of choices. For example, choose the menu and then the command under that menu.</td>
</tr>
<tr>
<td>courier text</td>
<td>Text in this format indicates a command line to be typed.</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Angle brackets enclose user-supplied names.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Brackets enclose optional clauses from which you can choose one or none.</td>
</tr>
</tbody>
</table>

Oracle Corporation is the second largest software company in the world. It is also the leading supplier of software for information management, with products and services being used in more than 140 countries.

Oracle provides an integrated line of software for database management, applications development, decision support, and office automation. These products are available for mainframes, minicomputers, personal computers, network computers, and personal digital assistants. They enable organizations to integrate various computers, operating systems, networks, and database management systems into a single, unified resource.

In addition to software, Oracle provides consulting, education, and support services.
ABM Analyzer is a reporting and analysis application. It enables you to navigate the Oracle ABM database using Oracle Discoverer, and to compare details across dimensions such as time periods, accounts, customers, and products. ABM Analyzer also enables you to customize reports by using such Discoverer functions as drilling, pivoting, and sorting data. ABM Analyzer automates the manual procedures required to run a report in ABM.

This chapter contains the following sections:

- What is Oracle ABM?
- What is Oracle Discoverer?
- Basic Features of ABM Analyzer
- The ABM Analyzer Integration Process
- ABM Analyzer Integration

What is Oracle ABM?

Oracle ABM is an enterprise-wide, activity-based costing (ABC) and management application that supports any ABC methodology in any industry. ABM provides flexible modeling, which enables profit and loss analysis to occur at any level of the organization. Activity-based analysis of profitability provides a new foundation for making decisions about customers, products, and services. It also facilitates volume-based forecasting of expenses, capacity, and resources.

The Oracle ABM solution includes both ABM Analyzer and SEM Exchange. (SEM stands for Strategic Enterprise Management.) SEM Exchange enables you to completely integrate with Oracle General Ledger those auditable monetary amounts that are the source of operating expenses viewed in ABM.
What is Oracle Discoverer?

Oracle Discoverer is a multidimensional relational online analytical processing (OLAP) and reporting tool. The Discoverer Administration Edition enables a system administrator to customize the End User Layer so that users can instantly access specific, predefined reports. The Discoverer User Edition enables users to navigate and construct reports, select data items based on the existing relational structure, and to perform advanced data edits.

Basic Features of ABM Analyzer

The following are basic features of ABM Analyzer:

- Built-in multidimensional reports on ABM objects (such as departments, activities, materials, and cost objects) for cost and profitability analysis.
- Sophisticated security model allows access control over models and period data sets.
- Wizards automate query definitions of SQL for accessing ABM tables.
- Supports a mix of dynamic and precomputed queries to optimize performance. This feature is invisible to the user.

With ABM Analyzer, you can do the following:

- Perform cost variance analysis by comparing actual, budgeted, or forecast amounts.
- Define attribute sets for presenting data in new dimensions.
- Rapidly create new ABM reports from a list of predefined dimensions on ABM data.
- Add and remove dimensions from reports by selecting folders and items in ABM Analyzer.
- Drill up or down through predefined ABM hierarchies.
- Store workbooks in the database for enterprise-wide distribution.
- Extract model data and structure from ABM and import into another model or separate ABM instance.
The ABM Analyzer Integration Process

The process of integrating ABM and Discoverer with ABM Analyzer involves four tasks and an optional fifth step. They are as follows:

1. **Install Discoverer and ABM.** ABM Analyzer needs both ABM and Discoverer to be installed. Refer to the *Oracle ABM Installation Guide*, the *Oracle Discoverer Administration Guide*, and the *Oracle Discoverer User Guide* for details.

2. **Define EUL and Business Areas.** The system administrator, using Discoverer Administration Edition, creates the End User Layer and installs the ABM Analyzer business areas and workbooks. Refer to the *Oracle ABM Installation Guide* for more information.

3. **Set Up Security.** The system administrator defines users and roles through Oracle Applications. The administrator also grants business area security privileges to users and responsibilities. Refer to the *Oracle ABM Installation Guide* for additional information.

4. **Load or Create Workbooks.** The system administrator loads or creates workbooks using Oracle Discoverer User Edition.

5. **Add Attributes to Worksheets (Optional).** The administrator, using Discoverer Administration Edition, customizes the ABM Analyzer workbooks. Each attribute adds a new dimension to a worksheet.
Figure 1–1 illustrates the ABM Analyzer integration process.

Figure 1–1  Process Flow for ABM Analyzer Integration

ABM Analyzer Integration

The ABM Analyzer administrator installs and configures the business areas, assigns business area access to users, and installs the ABM Analyzer workbooks. Users are predefined in the Oracle Applications environment. The administrator can create new business areas or add attributes to existing business areas at any time. Users access ABM Analyzer workbooks through Oracle Discoverer User Edition.
Figure 1-2 shows the architecture of the ABM Analyzer package as integrated with Discoverer and ABM.
ABM Analyzer workbooks have predefined attributes and you can add calculations, totals, and percentages to help identify trends and relationships. You can also apply special filters (conditions and parameters) to a worksheet, share workbooks with other users, and export data to Microsoft Excel.

This chapter discusses how to use, create, copy, and customize workbooks. It is broken into sections as follows:

- Opening Workbooks and Duplicating Sheets
- Creating New Worksheets
- Using Tools
- Sharing Workbooks
- Exporting Data to Excel
- Data Variance
- For Further Information
Opening Workbooks and Duplicating Sheets

This section describes how to open an existing workbook or duplicate worksheets in a different format.

How To Open an Existing Workbook

1. Log in to Discoverer User Edition with your user name and password.

2. From within Discoverer User Edition, select *Open an Existing Workbook*.

3. Select Database as the location of the workbook.

4. Select Next to continue.
A list of workbooks stored in your ABM database appears.

5. Select a workbook from the list and choose Open.
A progress screen displays while the last opened sheet in your workbook is formatted for viewing.

When formatting is complete, your workbook opens to the sheet that was active when the workbook was previously open.
How To Make a Copy of an Existing Worksheet

1. Open the worksheet in Discoverer User Edition.

2. To duplicate your sheet as a crosstab, select Sheet, then Duplicate as Crosstab. To copy your sheet as a table, select Sheet, then Duplicate as Table.

3. Customize the placement of row and column headers by using the Layout tab.

4. Select Options.

5. In the Sheet Format tab, choose whether to show a title, cell grid lines, or row numbers, and how to display null values. You can also select a maximum number of rows to display per page.
6. Select the **Query Governor** tab.

7. Choose when to use summary data. You can also set warnings if a query is predicted to exceed a time limit, or limit query time or the volume of data that a query returns.

8. When you are finished, choose **OK**.

ABM Analyzer generates a duplicate worksheet.
Creating New Worksheets

You can create a new worksheet within a standard workbook to include dimensions for different analyses. In doing so, you can select from a list of folders available for the standard business areas, or from the folders created by the system administrator when new business areas are defined.

How To Create a New Worksheet

1. From the File menu, select New to create a worksheet.
2. Select a format for the worksheet:
   - The Table and Page-Detail Table lists data in rows and columns.
   - The Crosstab and Page-Detail Crosstab lists data in rows and columns that you can pivot, displaying data in more than two dimensions. For example, one row could contain a period dimension underneath which one or more dimensions are grouped (such as product line or department).
3. Choose Next.
4. To include an item in your new worksheet, highlight the item in the Available list and choose Add (the button pointing to the Selected list).

Note: Items not associated with one of the four ABM Analyzer business areas, or business areas to which the system administrator has granted access, are not included in the Available column. However, the system administrator can use the join feature in Discoverer to join folders between different business areas. For more information on using the join feature, see Oracle Discoverer Administrator’s Guide.

When you create a new workbook or new worksheet for an existing workbook, a wizard displays all of the folders available for a business area. In the following example, the Activities business area contains three standard folders: Activity Rates, Activity Rate Sets, and Activity Rate Data Sets.
5. Choose OK to finish creating your worksheet.

Using Tools

Discoverer User Edition contains tools for customizing workbooks. For example, you can apply filters so that a worksheet displays only data meeting certain criteria, such as revenue greater than a given amount. You can add totals and percentages, creating new summary rows or columns of data. This makes data easier to present and helps in identifying trends and relationships. In addition, you can add custom calculations that relate items in the worksheet, such as a field that displays data for all accounts where the account department is the same as the material department.

Conditions

A condition is a logical relationship between an item or calculation and another item, another calculation, or a parameter. A logical relationship means that one entity is greater than, equal to, or less than the other. A parameter is a placeholder for a condition requiring values to be entered upon activation. (See "Parameters".)
ABM Analyzer uses conditions to limit or filter the data it returns for a given worksheet. This enables you to view, without modifying the base data, only records in which data for a certain field exceeds or falls below a given threshold or meets a more complex logical condition.

You can create conditions in the Discoverer Administration Edition and add them to business areas for later incorporation into your workbooks. The following section describes how to add conditions to ABM Analyzer workbooks from within Discoverer User Edition. For more information on these options, consult the Oracle Discoverer Administrator's Guide.

**How To Create a Condition**

1. Log in to Discoverer User Edition. Open the ABM Analyzer workbook containing the sheet to which you want to apply a condition.

2. Select the tab for the worksheet.

3. From the **Tools** pull-down menu, select **Conditions**.

4. If items in your worksheet have predefined conditions, then you can select an item from the pull-down menu.

5. To create a new condition, select **New**.
6. Enter a description for your condition using two operands and an operator. Example: Volume > 500M.

Table 2-1 describes the conditional operators.

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Equal to</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Not equal to</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than</td>
</tr>
<tr>
<td>&lt;</td>
<td>Less than</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less than or equal to</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td>LIKE</td>
<td>Similar to (using wildcard matching)</td>
</tr>
<tr>
<td>IS</td>
<td>Equals</td>
</tr>
<tr>
<td>IS NULL</td>
<td>Contains no data (not even zero)</td>
</tr>
<tr>
<td>IS NOT NULL</td>
<td>Contains some data (even zero)</td>
</tr>
<tr>
<td>IN</td>
<td>Is contained in</td>
</tr>
<tr>
<td>BETWEEN</td>
<td>Value lies inside two values</td>
</tr>
<tr>
<td>NOT IN</td>
<td>Is not contained in</td>
</tr>
<tr>
<td>NOT BETWEEN</td>
<td>Value lies outside two values</td>
</tr>
<tr>
<td>NOT LIKE</td>
<td>Not similar to</td>
</tr>
<tr>
<td>!= or ^=</td>
<td>Not equal to</td>
</tr>
</tbody>
</table>
7. To group conditions of three or more operands, select **Advanced**. You can use four types of grouping operators: OR, AND, NOT OR, and NOT AND. Conditions are applied in that order.

8. Select **OK** to exit the window when you are finished.

9. Select **OK** to finish defining your condition.

10. To apply your condition now, let it remain selected. The workbook will be updated immediately. To apply the condition later, deselect it.

11. Select **OK** to create the condition.
Using Tools

12. To apply the condition on demand, select **Tools**, then **Conditions**. From the pull-down menu, select an item for which you defined the condition.

**Sorts**

Adding sorts to a worksheet facilitates readability or the flow of information. For example, you could change the way data is sorted in the Activity Rate Workbook by changing the default Department Name setting to Activity Name. You can also define multilevel sorts, which orders sorting by dimension.

---

**Note:** If you save a worksheet after applying a condition, the condition becomes permanently applied.
How To Define a Sort

1. From your active worksheet, select **Tools**, then **Sort**.

2. In the Sort Crosstab interface, do the following:
   a. Choose the location of the items to be sorted. In crosstab worksheets, this depends on how you have organized the fields.
   b. From the pull-down menu, select an item on which to sort.
   c. To select a data point on which to sort, select **Add** and select a data point from the list.
   d. Choose a sort direction: Low to High, or High to Low.
   e. Continue adding data points in the order in which you want data sorted.
   f. To define data points to sort for this item, select a different item from the list. Continue applying sorts to different items as needed.
   g. To reorganize a multilevel sort, select a level and then select Move Up or Move Down.

3. Choose **OK** to apply your sort criteria to the open worksheet. You may need to close and reopen the worksheet to view the results of your sort.
Totals

With the Totals feature, you can add summary columns or rows containing functions such as summations, averages, and maximums and minimums to a worksheet. You can define multiple totals based on different worksheet items. Totals can expose trends that were not apparent from the raw data.

How To Add a Total

1. With the worksheet open, select the Tools menu, then Totals.
2. To see totals that have been defined for your worksheet, select items from the pull-down menu.
3. Select Edit to show the characteristics of a total.
4. To create a new total, select New.
5. Choose between totaling on a specific data point or on all data points in the worksheet.
6. Select the type of total you want to create from the drop-down list.

Table 2-2 describes the totaling options.
Using Workbooks

Table 2–2  Totaling Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum</td>
<td>Adds all the values</td>
</tr>
<tr>
<td>Average</td>
<td>Adds all the values and divides by the number of values</td>
</tr>
<tr>
<td>Count</td>
<td>Counts the total number of values</td>
</tr>
<tr>
<td>Count distinct</td>
<td>Counts the total number of unique values</td>
</tr>
<tr>
<td>Minimum</td>
<td>Finds the lowest value</td>
</tr>
<tr>
<td>Maximum</td>
<td>Finds the highest value</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>Calculates the square root of the variance of the values</td>
</tr>
<tr>
<td>Variance</td>
<td>Calculates the sum of the squares of the differences between each value and the arithmetic mean divided by the number of values</td>
</tr>
<tr>
<td>Percentage of Grand Total</td>
<td>Calculates the grand total of the row or column and then finds the percentage of the current column or row of the Grand Total</td>
</tr>
</tbody>
</table>

7. Select a placement option: grand total at bottom, grand total on right, or subtotal at each change in an item.

   If you subtotal at each change in an item, you can select a different item from the one on which your total is based. For example, you can add a summary column for values at each data set represented in the worksheet.

8. If you do not want to display totals for single rows of data, then select the Don’t display total for a single row box.

9. If you selected grand total at bottom or grand total on right, then you can calculate totals for all items in the worksheet or only the items currently displayed. For example, if you have drilled through a level of detail, then you can exclude or include that level.

10. Select a label for your total.

    You can generate a label automatically or build one from the names of items and values in your worksheet. For example, if you were totaling on Driver Volume, then the Sum&Item would display Driver Volume Sum.

11. Select OK to create your total.
Percentages can be grouped by category and added to worksheets. For example, you can group the percent growth in each data point between two periods. As with totals, this is a useful way of adding another analytical layer to a worksheet that is not provided by the base data.

**How To Add a Percentage**

1. With your worksheet open, go to the **Tools** menu and select **Percentages**.
2. Select **New** to create a new percentage.
3. Select, from the drop-down list, the item on which you want to base the percentage.

   The system automatically displays in the name field a name for the percentage. You can edit the name if you want.

---

**Note:** Save your worksheet only if you want this total to be added permanently to the worksheet. You can avoid changing the original by creating a duplicate (see **Opening Workbooks and Duplicating Sheets**) and adding the percentage to the duplicate sheet.
4. Edit the following parameters:
   
   a. Select one of these options: grand total for all values, grand total of each column, grand total of each row, or subtotal at each change in a specific dimension.

   b. Select either to calculate the percentage for the current page items only or for all page items.

      For example, if you have drilled to detail on a category, then you can exclude data that is hidden from your percentage.

   c. Choose to either display a subtotal percentage or a percent of grand total.

   d. If you want, then insert item names, data point names, or values to customize your label.

5. Select **OK** to create your percentage.

   If you apply the percentage immediately, it is added directly to your worksheet.

   **Note:** If you save your worksheet, then the percentage is added permanently to it. You can avoid changing the original worksheet by creating a duplicate (see Opening Workbooks and Duplicating Sheets) and then adding the percentage to the duplicate.
Calculations

Calculations are similar to totals in that they are functions or operations performed on worksheet items, or between items and values, parameters, or other calculations. However, totals include only a subset of functions while calculations can include such complex functions as the following:

- Conversion functions
- SQL commands to the database
- Date functions
- Grouping functions (including average, count, max, and min)
- Numeric functions
- String functions
- Other functions

Calculations can be performed on any item available to a worksheet, including any item in the attribute folder from which that worksheet is created.

How To Add a Calculation
1. From the Tools menu, select Calculations.
2. Select New to create a new calculation.
3. Enter a name for your calculation.
4. Build the calculation using selected items, items from the folder on which your worksheet is based, functions, other calculations, or parameters.

In the following example, the function returns the hexadecimal value of each quantity sum in the worksheet.
5. Select **OK** when you have finished creating your calculation.

6. To create multiple calculations, repeat steps 2 through 5.

---

**Note:** If you combine detail and aggregate data points, such as a value and a value sum, then the system displays a message that your action could create misleading results.

---

7. If you do not want to enable the calculation yet, then deselect the checkbox.

8. If you are adding the calculation immediately, select **OK**.

   If you left the calculation selected, it is added to your worksheet as a new column or row.

---

**Parameters**

A parameter is a condition or calculation with fields that you designated. When the condition is activated, you are prompted to input values for the fields required by the parameter. After you enter the values, worksheet data is filtered by the parameters.

If a number of people will be accessing the ABM Analyzer workbooks, then parameters can be used to dynamically correlate the information needs of each person with the appropriate worksheet data.
How To Define a Parameter

1. From the worksheet for which you want to define the parameter, select **Tools**, then **Parameters**.

2. Select **New** to create a new parameter.

3. Enter a name and the item on which you are basing the parameter. Examples include data set and model name. You will be prompted to enter a value for this parameter when the condition defined in this interface is activated.

   In the following example, the parameter name of RateBeginDate is based on the Activity Rate Sets Begin Date item.

4. Enter the prompt that you want to see when the condition is activated.
   
   Example: *Please enter a model name*.

   In the example, the following message appears: *Please enter a rate set begin date (dd-mm-yy)*.

5. Enter a description of the parameter to be displayed.

6. Select a default value and whether you want to enable others to enter multiple values.

7. Define the condition on which the parameter is based.

8. Select **OK** to apply the parameter.

9. To create additional parameters, repeat steps 2 through 8.
In the following example, the related conditions of begin date and end date are going to be applied:

![Image of parameter values dialog]

**Sharing Workbooks**

You can define sharing privileges for workbooks, which enables others to access and analyze the data. This feature is useful when you want to share and disseminate information among departments and workgroups in your organization. There are two ways to share a workbook:

- Define a group of users or responsibilities that can access the same workbook.
- Define a group of workbooks that a user or responsibility can access.

**Note:** You must have grant workbook privileges in order to share workbooks. The system administrator assigns privileges in Discoverer Administration Edition by selecting **Tools**, then **Privileges**. For more information, see the *Oracle Discoverer Administrator’s Guide.*
How To Define Sharing Privileges for a Workbook

1. Log in to ABM Analyzer with your user name and password. Connect to the database in which your workbooks are stored.

2. From the File menu, select Manage Workbooks, then Sharing.

3. Select the workbook you want to share from the pull-down menu.

4. Select users and responsibilities from the Available list. Then click the button that points to the Selected column to move the users or responsibilities.

   **Note:** To select multiple users or responsibilities, press the Control key on your keyboard during selection.

5. If you want to define a list of workbooks that a single user or responsibility can access, select the Users —>Workbooks tab.
6. Select a user or responsibility from the pull-down list and then select workbooks from the Available list.

7. Select OK.

Exporting Data to Excel

ABM Analyzer data can be exported to Microsoft Excel one sheet at a time, but not an entire workbook at once.

How To Export to Microsoft Excel

1. Open the worksheet to be exported.
2. From the File menu select Export, or select the Microsoft Excel icon in the Discoverer toolbar.

3. If this is the first export during the current Discoverer session, then Windows prompts you to either save the file or to open it immediately. The prompt displays the default location and file in which ABM Analyzer exports are stored. Note this location and file name.
4. To avoid overwriting your data, Oracle recommends that you rename the Microsoft Excel file with a descriptive name.
Data Variance

You can perform variance analysis on a given workbook to compare actual with forecast data. Variance analysis can be performed on the following types of data, to a maximum of four data sets:

- Department account data
- Activity account data
- Activity rate data

Add a variance worksheet to enable data variance in the Departments and Activities workbooks.

How to Add Data Variance to a Workbook

1. With the workbook open, launch the New Sheet wizard.
2. Select the type of worksheet to create, then select Next.
3. From the list of available business areas, select the one corresponding to your workbook. If necessary, expand the business area to see the folders beneath.
4. Select OK. The Data Variance sheet is then added to your workbook.

For Further Information

For details about working with workbooks and worksheets, refer to the Oracle Discoverer User Guide. It addresses the following topics:

- Pivoting and sorting data
- Drilling into and out of data
- Using graphs
- Joining folders
- Using calculations, such as subtracting local cost from rolled up cost in the Activity Rate Report
This chapter discusses the worksheets and reports in each workbook, as well as the drilling hierarchies for the dimensions used in reports. The chapter is divided into the following sections:

- Worksheets in Standard Workbooks
- Case Study
- Departments Workbook
- Activity Workbook
- Materials Workbook
- Cost Objects Workbook
- Model Export Using Discoverer Worksheets
Worksheets in Standard Workbooks

ABM Analyzer contains five standard workbooks. You can add worksheets to them to display results of calculations or totals, or to display the same data in a different way.

Table 3-1 lists the worksheets in each of the standard workbooks.

<table>
<thead>
<tr>
<th>Workbook</th>
<th>Worksheets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departments 1</td>
<td>Department account and department statistic</td>
</tr>
<tr>
<td>Activities</td>
<td>Activity cost account, activity statistic, activity rate, activity rate set, activity driver source, department driver source and driver volume</td>
</tr>
<tr>
<td>Materials</td>
<td>Material account, material statistic, and material cost</td>
</tr>
<tr>
<td>Cost Objects</td>
<td>Cost object account, cost object statistic, cost object revenue and cost, cost object detail</td>
</tr>
<tr>
<td>Model Exports</td>
<td>Department Account Data, Department Statistic Data, Department Activity Account Data, Department Activity Statistic Data, Activity Rate Structure, Cost Object Account Data - Non Cost Accounts, Cost Object Account Data - Revenue Accounts, Cost Object Statistic Data, Bill Item Data, Material Accounts Data - Cost Accounts, Material Account Data - Non Cost Accounts, Material Statistic Data, Material Unit Cost Data</td>
</tr>
</tbody>
</table>

1 In the ABM Analyzer application, departments are sometimes referred to as Reporting Entities (REs).

After you run calculations in ABM, it stores the results in data sets (DS) that are viewable with ABM Analyzer. If you do not run ABM calculations, you can view only your input data with ABM Analyzer. Some calculations can be defined and run from within ABM Analyzer. These calculations are used on the data items that are visible within a given worksheet.

**Note:** Oracle recommends that you copy a worksheet before adding optional attributes. This preserves the original worksheet and helps you track changes you make to the worksheet.

The standard workbooks do not include ABM attributes. Such attributes are defined by the user. See Chapter 4, “Adding Optional Attributes”.
Case Study

This case study is designed to illustrate the benefits of using ABM Analyzer:

- ABM Analyzer makes it easier to see the contribution made to a customer segment by each activity involved in the cost of delivering final product.
- ABM Analyzer can help you to determine departmental costs, monitor productivity as output per unit cost, and to see trends over time.

Introduction

The case study is based on a fictitious printshop chain called K&L Printing. We will focus on one of the stores, owned by a man named Tom, for the sake of simplicity.

K&L offers eight products: pamphlets, brochures, glossy report covers, theses, rough drafts, resumes, black and white copies, and color copies. Each product uses a unique combination of materials, and each material has its own unit price. The following table lists the materials used by Tom’s shop:

<table>
<thead>
<tr>
<th>Sheets of Paper</th>
<th>Ink per Page</th>
<th>Toner per Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>70# coated (8.5x11”)</td>
<td>1-color</td>
<td>B/W</td>
</tr>
<tr>
<td>20# uncoated (8.5x11”)</td>
<td>2-color</td>
<td>Color</td>
</tr>
<tr>
<td>80# coated</td>
<td>8.5x11”</td>
<td>3-color</td>
</tr>
<tr>
<td>80# uncoated</td>
<td>8.5x11”</td>
<td>4-color</td>
</tr>
<tr>
<td>70# coated</td>
<td>11x17”</td>
<td></td>
</tr>
<tr>
<td>80# coated</td>
<td>11x17”</td>
<td></td>
</tr>
</tbody>
</table>

The printshop contains four departments: Order Processing, Pre-Press, Press Operations, and Finishing. The function of each department is illustrated in the following diagram and table:
In preparing this case study, we did the following things in ABM:

1. Assigned cost from GL accounts to activities through the mapping process.
2. Calculated activity rates for all activities.
3. Set up a bill of resources for each product to include consumption quantity of activities, material, and cost objects from a different bill of resources.
4. Calculated unit cost of a product and extended unit cost.
5. Entered revenue for each product for a data set.
6. Created a fictitious department called Print Production to hold all account data from the general ledger.
Cost Object Revenue and Cost Report

Tom realizes that one of his products, glossy report covers, is losing money for the data set January 1998–Actual. To find out how much, he accesses the ABM Analyzer standard reports to view the product’s cost components. He discovers in the Cost Object Revenue and Cost Report that his company incurred a loss of $144,881 on glossy covers for data set January 1998–Actual.

The Cost Object Revenue and Cost Report also shows that the extended unit cost (which is the unit cost multiplied by the number of units sold) is $1,176,229.28 and that 2,000,000 units were sold.
Case Study

Cost Object Detail Report

Tom then accesses the Cost Object Detail Report to get a breakdown of the resources used to make a unit of glossy covers. The report shows that perform design work has the highest activity cost of all the activities related to glossy covers.
Activity Rate Set Report

To investigate why the activity rate *perform design work* is so high, Tom goes to the Activity Rate Set Report to obtain the activity cost amount and the driver information. In this report, the Cost Object represents a product, so Tom can see the cost components within this product. He can also see the costs of several activities, sorted by decreasing amount. However, he does not know why the activities are so expensive, because he can see only the component costs. He wants to see activity costs per department so that he can compare costs and productivity within the Pre-Press department.

The Activity Rate Set Report shows that the total activity cost for *perform design work* is $28,568.17, making it the most expensive activity in the Pre-Press department. The report also shows that the driver volume is 5246. An activity rate is high either because the total activity cost assigned to the activity is very high, or the driver volume is very low.

At this point in the analysis, Tom’s knowledge of the industry and the company is critical. Although he can analyze historical trends, he ultimately must determine if the driver volume and the dollar cost per driver volume are reasonable. To obtain additional information, Tom drills down this report for detailed data on an activity such as driver department or driver name. This helps him to further analyze the driver volume data.

Some drivers are controlled by the same department as the activity expenditures. Other drivers can be measured and controlled by distinct departments. This separation of control between costs and drivers could provide clues about organizational changes that Tom can implement.
Drilling Down to Driver Department

To drill down to Driver Department, Tom does the following:

1. In the Activity Reporting Entity column, he right-clicks the arrowhead for Pre-Press.
2. Selects Driver Department as the hierarchy level he wants to drill to.
3. Selects Driver Name to drill to that.

Possible Additional Analysis

Tom can conduct additional analysis using ABM Analyzer, including the following:

- Locating more uses for a given driver volume output.
  Ideally, more than one revenue stream or product is supported by a given driver volume. For example, a mailing could promote more products and services. A set of activities can describe a promotional mailing process.

- Using more productive technology to increase driver volume output measures, with lower cost.
  For example, Tom might use logistics software to decrease needed deliveries and reduce warehousing expenses by increasing utilization of floor space as an input.
Reassigning critical machinery or people resources where the largest cost impact could occur.

Tom could change the organizational structure to reallocate people across activities, which would change activity rates and driver volumes. This can decrease profitability in the short term to satisfy a longer term objective. It is often prudent to quantify the impacts.

**Driver Department and Driver Name**

The following window shows the results of drilling to Driver Department and Driver Name from the Activity Department.

In the drilled-down report, Tom sees the name of the driver volume of *perform design work* for January 1998–Actual. The Driver Name for driver volume 5246 is # of *work orders–design* and the driver department is Print Production.
Driver Volume Report

Tom then accesses the Driver Volume Report to view the details for the driver department Print Production, and driver name # work orders design.

The Driver Volume Report shows the source type information for the driver volume for each department driver. Different source types can have different levels of accuracy and timeliness.

In the example, the driver # work orders - design has a source type of Department Stat. This means that the driver volume 5246 is derived from data entered or calculated in the Department Statistical Data window within ABM.
Department Driver Source Report

Tom can then query the Department Driver Source Report to get the breakdown of the total for design work orders in terms of source reporting entities. In other words, he can find out how many work orders are from given reporting entities.

By comparing driver source value across multiple data sets in the Department Driver Source Report, you can determine whether a resource is under or over capacity. If it is under capacity, you can investigate possible means of maximizing use.

The case study illustrates how to move the data set to the column axis in order to generate multiple data set columns, such as forecast or simulated data sets. This enables you to obtain current capacity levels by comparing them to a baseline period. The baseline period can be an arbitrary past period with known capacity measurements.

Tom may want to correlate this output measure (number of work orders) with other measures, such as staffing levels and number of walk-in customers. By looking across products, Tom can see how driver volume changes in one product are correlated with other products. The higher the positive correlation, the greater the need for independent resource capacity. Low or negatively correlated driver volume suggests that Tom can use shared services to provide resources for handling those drivers.
Case Study

Activity Cost Account Report

Tom goes to the report Activity Cost Account Report to see the activity cost broken down in terms of Department accounts. In the Activity Rate Set Report earlier in this section, the activity cost for perform design work $28,568.17 came from salary - non supervisory for Pre-Press and accounts (with prefix R-) that were Redistributed to department Pre-Press via mapping.
Activity Cost Report

In the Activity Cost Report, Tom adds a percentage column to further analyze the data, for example, to find out the percentage of R-Salaries (supervisory) of activity *perform design work* for department Pre-Press as of the total R-Salaries (supervisory) of all activities for Pre-Press. The report shows that the R-salaries for Pre-Press *perform design work* account for 40 percent of the total activity cost $10,000.

Adding a Percentage Column

To add a percentage column, do the following:

1. Select the Local Cost Sum column.
2. From the Tool menu, select Percentage.
3. Select the New box.
4. In the Percentage dialog box, select *each change in*
5. Choose Account Name in the drop box.

With the analysis from the reports, Tom can now determine whether the costing behavior of activity *perform design work* is appropriate by comparing with other activities or with the forecast data. He can also obtain the capacity level of an activity and determine whether to increase the driver volume for an activity such as increasing the number of work orders served by the activity *perform design work*.
Departments Workbook

The Departments workbook contains two worksheets. These worksheets organize account and statistic data by reporting entities such as cost centers, profit centers, or shared service centers throughout the organization. You can analyze department account and statistic results by budget or by actual or forecast scenarios, and thus examine trends. You can drill one level at a time through a hierarchical structure of these departments.

Worksheets

To add items to dimensions for each worksheet, do the following:

1. From the Sheet menu, select Edit Sheet.
   The business area for that workbook should already be selected.

2. To add items:
   a. Expand the highlighted folders.
   b. Select items.
   c. Click the right-arrow button to move items into the Selected panel.

3. Click OK when you are finished.

1 The term Reporting Entity or RE is sometimes used interchangeably with Department.
The Department Account report displays accounts and their cost data for departments. You can add the department, account, and department account attribute dimensions to this report to further summarize and group department cost information. (See Chapter 4, "Adding Optional Attributes".)

The following items are used for the report dimensions:

- Page dimensions, including model name and data set name.
- Column dimensions, including cost amount.
- Row dimensions, including account name.
To see department account information across data sets, do either of the following:

- Select Sheet, then Crosstab Layout to drag the page item Data Set Name to the row axis.
- Edit worksheet to include the data set item from the Department Account Data Set folder.

**Department Statistic**

The Department Statistic report compares statistical data by department. The statistics can be sorted within each department. This report does not display total or subtotal because statistics are not assumed to be additive. If the user inserts subtotals, then the report could show misleading figures.

You can add attribute dimensions for department, statistic, and department statistic to this workbook to group the statistic information. The following items are used for the report dimensions:

- Page dimensions include model name and data set name
Column dimensions include statistic value
Row dimensions include statistic name

See Chapter 4, "Adding Optional Attributes" for more information.

The Department Statistic report enables you to verify, before mapping, that target departments have the same driver statistics. For example, you could see which statistic drivers were assigned to target departments before you use the Full Time Headcount driver to map the benefit cost of a department to other departments. This makes it easier to avoid including a department without the Full Time Headcount driver.
Viewing and Sorting Statistics

You can see all departments that have a given statistic by rearranging the columns. You can also sort the statistics alphabetically by name, or numerically.

To sort statistics, select the **Tools** menu, then **Sorts**. See Chapter 2, "Using Workbooks", "Sorts".

To compare statistical data by a statistic driver, move the item **Statistic Name** to the row axis by selecting **Sheet**, then **Crosstab Layout**. The new report shows statistical data of each driver for each department.

You can edit the report to show statistical data for multiple data sets by one of two ways:

- Move the Data Set item from page axis to row axis.
- Edit the worksheet to include the data set item from the folder Department Statistic Data Set.
Departments Workbook Hierarchy

Department workbooks are organized into hierarchies, the top level being the highest. Here are two examples of how your hierarchies might be organized:

**Example 3-1  Department Account Hierarchy**
- Highest level: Department Name
  - Next level: Account Name

**Example 3-2  Department Statistic Hierarchy**
- Highest level: Department Name
  - Next level: Statistic Name

The following diagram shows the hierarchies you can drill up or down in, in the worksheets.
Examples of Using Hierarchy in Report

The side axis of the Department Account Report has two items, named Department Name and Account Name, with arrowheads by their names. When you want to drill down an item, place the pointer on the arrowhead. The pointer becomes a magnifying glass. Then click to obtain a drop-down menu and select another level of data.

If you drill on Department, you get a drop-down menu showing Department as the current level, and Department Type Name as the next level.

If you drill on Account Name, then a drop-down menu appears. It shows that Account Name is the current level, and that Department Type Name and Department Name are the other two levels.
The Activity workbook contains seven worksheets. These enable you to analyze activity data such as activity driver, activity cost, and activity statistics.

You can compare activity costs across cost centers and time periods. You can also compare the activity driver volumes that determine activity rates in different activity rate sets. The Activity Rate Report and Activity Rate Set Report show activity rates in the form of dollars per activity divided by activity driver volume. Each activity can have its own cost (local) or a rolled-up cost (sum or local cost) of all subactivities by data set.
Activity Cost Account

The Activity Cost Account report provides the department account level detail underlying the activity costs on the activity rate set report. It also provides a breakdown of the total activity cost of all the department activities. For each department activity, the report shows the components of the activity cost, and the department accounts from which the amounts were mapped.

You can add attribute dimensions for activity, department activity, account, and department account to further summarize and group the activity account costs. See Chapter 4, “Adding Optional Attributes” for more information.

The following items are used for the report dimensions:

- Page dimensions include model name and data set name.
- Column dimensions include local cost amount.
- Row dimensions include activity name and account name.
Activity Statistic

The Activity Statistic report displays activity statistic quantities. It helps you to analyze trends in the activity statistics that are used to map costs. You can add attribute dimensions for activity, department activity, statistic, and department statistic to summarize and group the statistic values. See Chapter 4, "Adding Optional Attributes" for more information.

The following items are used for the report dimensions:

- Page dimensions include model name and data set name.
- Column dimensions include local quantity.
- Row dimensions include activity name and statistic name.
**Activity Rate**

The Activity Rate report displays local and rolled-up rates for activities and their related drivers. For a parent activity, the report may show both the rolled-up activity rate and local activity rate if the parent has its own activity cost (local) as well as activity cost rolled up from the child activities.

You might have several drivers related to an activity for product costing, budgeting, and performance measurement. The Activity Rate report enables you to quickly compare activity rates (which are activity costs divided by driver volumes) across different periods or different data set types.

To change to a different data set, select the down arrow of data set on the page axis.

To see data for all data sets available, move the data set from the page axis to the row axis by selecting Sheet, then Crosstab Layout.

You can add attribute dimensions for driver, department driver, activity, and department activity to further summarize and group the activity rate information.

The following items are used for the report dimensions:

- Page dimensions include model name and data set name.
- Column dimensions include local activity rate and rolled-up activity rate.
- Row dimensions include activity name and driver name.
With the Activity Rate report, you can analyze trends in activity rates, their associated activity costs, and driver volumes. An example would be to compare driver volumes across different periods.

**Activity Rate Set**

The Activity Rate Set report displays the current activities, drivers, and rates in a rate set with activity costs and driver volumes. An activity rate set is used to group activity rates into categories for defining different cost object costing scenarios. Use this report to analyze costing rates for estimating, planning, or simulation by selecting different rate sets or moving the Rate Set Name from page axis to row axis.

You can add attribute dimensions for driver, department driver, activity, and department activity to further summarize and group the activity rate information.

The following items are used for the report dimensions:

- Page dimensions include model name, data set name, and rate set name.
- Column dimensions include activity rate (local or rolled up), activity cost (local or rolled up), and driver volume.
- Row dimensions include activity name and driver name.
- Report parameters include the rate effective date.

When you run this report, the system prompts you to enter a rate set begin date and end date.

Driver Volume

The Driver Volume report displays the driver volume and source type data for all drivers in a model. The volume of a department driver is derived from one of the source types in ABM. The source types are: 

- Entered
- Department Acct
- Department Stat
- Act Acct
- Act Stat

The source type determines how ABM calculates the driver volume. If the source type is either Department Acct or Department Stat, then use the Department Driver Source worksheet to view the source information for the driver. Examples of source information include source department name, source account, and source statistics. If the source type is Act Stat or Act Acct, then use the Activity Driver Source worksheet. See "Activity Driver Source".

You can add attribute dimensions for driver and department driver to the workbook to further summarize and group driver volumes. See Chapter 4, "Adding Optional Attributes".
The following items are used for the report dimensions:

- Page dimensions include model name and data set name.
- Column dimensions include driver volume.
- Row dimensions include driver name and source type.

**Activity Driver Source**

The Activity Driver Source report shows the source details for the activity account and activity statistic that are used to derive driver volume. In ABM, a driver volume is either entered manually or referenced to Department Account, Department Statistic, Activity Account, or Activity Statistic data. The driver source type is located in the Driver Volume worksheet.

The following items are used for the report dimensions:

- Page dimensions, which include model name, data set name, and driver department name.
- Column dimensions, including the source value.
- Row dimensions, including the driver name, source activity department name, source activity name, source department name, and source name.
RE or Department Driver Source

The RE or Department Driver Source report shows source details for the Department account and Department statistics used to derive driver volume. In ABM, a driver volume is either manually entered or referenced to Department Account, Department Statistic, Activity Account, or Activity Statistic. The driver source type is contained in the Driver Volume worksheet.

The following items are used for the report dimensions:

- Page dimensions, including the model name, data set name, and driver department name.
- Column dimension, including the source value.
- Row dimensions, including the driver name, source department name, and source name.

Activity Workbook Hierarchy

Activity workbooks are organized into hierarchies. The top level of a hierarchy is the highest, and you can drill through them. Here are some examples of how your hierarchies might be organized:

Example 3–3  Department Account Hierarchy

- Top level: Department Name
  - Next level: Account Name

Example 3–4  Department Activity Hierarchy

- Top level: Department Name
  - Next level: Activity Name

Example 3–5  Department Statistic Hierarchy

- Highest level: Department Name
  - Next level: Statistic Name

Example 3–6  Department Driver Hierarchy

- Highest level: Department Name
  - Next level: Driver Name
The following diagrams show the hierarchies in the Activity worksheets:
Materials Workbook

The Material workbook contains three worksheets, which enable you to compare the material quantities used in products over different periods. You can also choose among materials to modify the bill of resources based on cost-benefit analysis.

Material Account Report

The Material Account report analyzes the material account details of all materials in a model. It shows all of the financial data used to calculate the material unit costs. This report is useful for comparing total material costs across departments.

The Material Account report uses the following dimensions:

- Page dimensions, including model name and data set name.
- Column dimensions, including costs.
- Row dimensions, including material name and account name.
Material Statistic Report

The Material Statistic Report shows material statistical data for all materials in a model. Material statistics are used to calculate material unit costs. You can compare the statistical data across multiple data sets by moving the Data Set item from page axis to row axis.

The Material Statistic report contains following dimensions:
- Page dimensions, including model name and data set name.
- Column dimensions, including statistic value.
- Row dimensions, including material name and statistic name.

Material Cost Report

The Material Cost report displays both material unit cost and extended material costs for all materials. Extended material costs equal unit cost multiplied by statistical data.

Use the Material Cost report to document a purchase price variance. To do so, multiply actual purchase quantities by the planned and actual unit costs stored in different data sets.

Note: Calculate a purchase price variance by using ABM rather than a Discoverer function.

The Material Cost report contains the following dimensions:
- Page dimensions, which include model name, statistic name, and data set name.
- Column dimensions, which include extended material cost or formula, material unit costs, and material statistic value.
- Row dimensions, which include material name and account name.
Material Workbook Hierarchy

Material workbooks are organized into drillable hierarchies, where the top level is highest. Here are some examples of how your hierarchies might be organized:

**Example 3-7  Department Statistic Hierarchy**
- Highest level: Department Name
  - Next level: Statistic Name

**Example 3-8  Department Account Hierarchy**
- Highest level: Department Name
  - Next level: Account Name

The following diagram illustrates the worksheet hierarchies:

![Diagram](image)

Cost Objects Workbook

Cost objects are any items that are used to build a bill of resources for calculating unit costs. Examples of cost objects include products, customers, and services.

The Cost Objects workbook has four worksheets. It enables you to uncover the root causes of changes in unit cost of cost objects, and to examine profitability. The latter is possible because cost objects are used to model item costs by consuming activities, materials, and other cost objects while generating revenues.
Cost Object Detail

The Cost Object Detail report displays all of the costs associated with each material and activity in the cost object. The report also displays details for all levels of the bill of resources, or BOR.

A Cost Object Detail report is produced for each cost object in the hierarchy of a given parent cost object, including the parent cost object. The report details the activities, materials, and cost objects at that level.

---

Note: Before you can run the Cost Object Detail report, you must do two things:

- Run the Cost Object Unit Cost calculation in ABM with the variable Write Line Items set to Y.
- Run the Cost Object Detail Report in ABM for every top cost object that you want to analyze.

---

The Cost Object Detail report uses data and several parameters from the bill of resources rollup calculation.

The following items are used for the report dimensions:

- Page dimensions, including parent CO (cost object) model name, parent BOR (bill of resources) type, parent CO name, data set name, and BOR level.
- Column dimensions, including extended consumption quantity, BOR, BOR line total cost, expanded RU (rolled up) material cost, and expanded RU activity cost.
- Row dimensions, including row number, child model name, child BOR type, child name, and child type.

When you open this worksheet, the system prompts you to enter the model ID, BOR type name, and BOR.
A parent cost object (parent CO) is a cost object on which you build a bill of resources for calculating a unit cost. In the bill of resources, a parent cost object consumes activities, materials, and cost objects. Each one of these items becomes a child of the parent. Activities and materials must come from the same model as parent cost objects, whereas cost objects can be from the same or different models from parent cost objects.

When a parent cost object includes in its bill of resources a cost object from another bill of resources, ABM calculates the numbers shown in the Cost Object Detail Worksheet as follows:

- BOR line total cost equals expanded rolled-up material cost, plus expanded rolled-up activity cost.
- Extended consumption quantity equals consumption quantity of resources by child cost object, multiplied by consumption quantity of child cost object for one unit of parent cost object.
- Expanded rolled-up material cost equals extended consumption quantity at child level, times unit cost of the child material unit cost.
- Expanded rolled up activity cost equals extended consumption quantity at child level, times unit cost of the child activity rate.

You need to run the Activity Rate Calculation, the Material Unit Cost Calculation, and the Cost Object Unit Cost Calculation in ABM. Each calculation run inserts new results into the DS that can be viewed in ABM Analyzer.

If a parent cost object does not include in its bill of resources a cost object from a different BOR, then in a simple bill of resources you can treat Extended
Consumption Quantity as consumption quantity, Expanded Rolled-up Material Cost as material cost, and Expanded Rolled-up Activity Cost as activity cost.

The following model uses a specific customer, called Customer #1, as the top level cost object. This customer consumes two different products (pamphlets and glossy covers) and two different activities. These, in turn, consume materials and activities.

**Example 3–9  Modeling a Bill of Resources Hierarchy**

The parent cost object, Customer #1, has a bill of resources per unit (level 1) as follows:

- 5 units of cost object ‘JRSCO3- Pamphlets’
- 6 units of activity ‘JOHNRE2- Special handling’
- 8 units of activity ‘JOHNRE1- Special handling’
- 7 units of material ‘JRSMAT1 - Glossy covers’

The bill of resources of child CO ‘Pamphlet’ per unit (level 2) is:

- 2 units of material ‘JRSMAT3 - Color paper’
- 3 units of activity ‘JOHNRE2 - Design pamphlets’
- 4 units of activity ‘JOHNRE1 - Design pamphlets’

The following table shows how extended consumption quantity is calculated by multiplying the child cost object Resources by the parent cost object Pamphlet:

<table>
<thead>
<tr>
<th>Bill of Resources of Child Cost Object Pamphlet</th>
<th>Consumption Quantity per Unit of Child Cost Object Pamphlet</th>
<th>Expanded Consumption Quantity per Unit of Parent Cost Object Customer #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material–Color Paper</td>
<td>2 units</td>
<td>10 units</td>
</tr>
<tr>
<td>Activity–JOHNRE2 Design Pamphlets</td>
<td>3 units</td>
<td>15 units</td>
</tr>
<tr>
<td>Activity–JOHNRE1 Design Pamphlets</td>
<td>4 units</td>
<td>20 units</td>
</tr>
</tbody>
</table>

ABM Analyzer calculates both the expanded rolled-up activity cost and the expanded rolled-up material cost by multiplying the extended consumption quantity by the activity rate and material unit cost.
The total of the expanded rolled-up activity cost column at level 2 is $6.00 + $19.2857 = $25.2857, according to the report. This figure becomes the expanded rolled-up activity cost for the line of cost object Pamphlets in the Cost Object Detail report for parent CO (level 1). The same applies to the expanded rolled-up material cost.

**Cost Object Account**

The Cost Object Account report shows the breakdown details on revenue account and extended cost account of a cost object. Using this report, you can obtain the account breakdown of revenue shown on the Cost Object Revenue and Cost worksheet. The extended costs shown in this report equal cost object unit cost multiplied by cost object statistics, and were created by running the extended cost object unit cost calculation in ABM.

It is based on the cost object statistic you entered as a calculation variable in ABM. It is not calculated by ABM Analyzer. If you want ABM Analyzer to calculate various extended costs of a cost object using different cost object statistics, then use the "Cost Object Revenue and Cost" worksheet.

You can add attribute dimensions for cost object, account, and department account to this workbook to further summarize and group cost object costs.

The Cost Object Account report contains the following dimensions:

- Page dimensions, including model name and data set ID.
- Column dimensions, including extended cost and revenue.
- Row dimensions, including cost object name and account name.
### Oracle Discoverer - [abmcomb]

#### Cost Object Account Worksheet

<table>
<thead>
<tr>
<th>Cost Object Name</th>
<th>Reporting Entity Name</th>
<th>Account Name</th>
<th>Extended Cost @</th>
<th>Revenue @</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect</td>
<td>Architect</td>
<td>Install Rev - Architect</td>
<td>$3,400,000.00</td>
<td>NULL</td>
</tr>
<tr>
<td>Budget A</td>
<td>Order Management</td>
<td>Product Revenue</td>
<td>$15,000,000.00</td>
<td>NULL</td>
</tr>
<tr>
<td>Budget B</td>
<td>Order Management</td>
<td>Product Revenue</td>
<td>$15,000,000.00</td>
<td>NULL</td>
</tr>
<tr>
<td>Budget C</td>
<td>Order Management</td>
<td>Product Revenue</td>
<td>$5,000,000.00</td>
<td>NULL</td>
</tr>
<tr>
<td>Installation</td>
<td>Installation</td>
<td>Install Rev - Install</td>
<td>$1,200,000.00</td>
<td>NULL</td>
</tr>
<tr>
<td>Interest Income</td>
<td>Collection</td>
<td>Financial Revenue</td>
<td>$2,500,000.00</td>
<td>NULL</td>
</tr>
<tr>
<td>Project Management</td>
<td>Project Management</td>
<td>Install Rev - Prj Mgmt</td>
<td>$900,000.00</td>
<td>NULL</td>
</tr>
</tbody>
</table>
Cost Object Statistic

The Cost Object Statistic report shows the statistics that are related to each cost object. Use this report to calculate the extended unit cost of cost objects by multiplying the cost object statistic shown in this report by cost object unit cost. This report can also analyze production levels over time. For extended cost data, see "Cost Object Revenue and Cost".

You can add attribute dimensions for cost object, statistic, and department statistic to this report to further summarize and group cost object statistic values.

The Cost Object Statistic report has the following dimensions:

- Page dimensions, including model name and data set ID.
- Column dimensions, including quantity.
- Row dimensions, including cost object name and statistic name.
**Cost Object Revenue and Cost**

The Cost Object Revenue and Cost worksheet enables you to do the following:

- Compare the profitability of all cost objects in a model.
- View the sales and cost of sales for all of the cost objects in a data set. Cost of sales is calculated by extending the cost object unit costs by the cost object statistic that you select in the Statistic Name page item.
- It shows the breakdown of the extended cost by activity cost and material cost.
- It enables you to create formulas combining cost object unit costs, revenues, and statistics. You could, for example, conduct profitability analysis across cost objects, across different time dimensions, or by using different statistics to calculate the extended unit cost.

To obtain more detailed information on cost object statistics, open the Cost Object Statistic worksheet. For more information about cost object accounts, open the Cost Object Account worksheet.

The values appearing in a page item drop-down list depend on the values that you select for the page item on its left. For example, suppose that the leftmost page item is called Model Name, and the one to its immediate right is called Data Sets. Consequently, the Data Sets drop-down list contains only data sets that are related to the model you selected in Model Name. To take this example a step further, suppose that you drag the Statistic Name page item to the leftmost position. The report responds by displaying a list of all statistics for all models. These results enable you to calculate extended unit costs with statistics such as units sold, units delivered, and units produced.

You can add cost object attribute dimensions to this workbook to further summarize and group cost object costs and revenues. For instructions, see Chapter 4, "Adding Optional Attributes".

The following items are used for the report dimensions:

- Page dimensions, including model name, data set ID, cost object statistic department, and cost object statistic.
- Column dimensions, including cost object name.
- Row dimensions, including revenue, extended unit cost, extended rolled-up material cost, extended rolled-up activity cost, margin, and quantity.
Cost Objects Workbook Hierarchy

Cost Objects workbooks are organized into hierarchies, with the topmost level being highest. Your hierarchies might be organized in a manner similar to these examples:

**Example 3–10  Bill of Resources Hierarchy**
- Highest level: Parent Cost Object Name
  - Next level: Child Resource Name

**Example 3–11  Department Statistic Hierarchy**
- Highest level: Department Name
  - Next level: Statistic Name

**Example 3–12  Department Account Hierarchy**
- Highest level: Department Name
  - Next level: Account Name

The following diagram illustrates the worksheet hierarchies that you can drill:
Data Set Hierarchy

You can perform time summarization for those reports having the data set dimension. You can also drill on the time dimension and apply conditions when querying data. For example, if you are using only the monthly data set period in ABM and want to obtain quarterly or yearly data, or both, then you must create a new data set period for quarter or year, or both, in ABM. However, by using ABM Analyzer, you can easily calculate quarterly or yearly data, or both, by adding Begin Date Quarter and Begin Date Year to your worksheet.

Use the Data Set Class, Data Set Type, and Data Set Period folder items if they are used in ABM. This prevents the system from erroneously adding data across a data set class, data set type, or data set period.

To add these items to a worksheet, select Sheet, then Edit Sheet, and then choose the data set folder in the Available column.

**Note:** To use the data set hierarchy correctly, you must include all three of the folder items if they are used in ABM.
Choose the level of time dimension for your report. To obtain data at all levels for year, quarter, and month, then go to the data set folder in the Available column and select Begin Date Year, Begin Date Quarter, and Begin Date Month.

When the yearly, quarterly, and monthly data are available in your worksheet, you can drill up and down in each dimension by clicking the arrowhead-shaped icon beside it.
The following is an illustration of the data set hierarchy:

```
- Data Set Data Hierarchy
  - All Years
    - Calendar Year
      - Calendar Quarter
        - Calendar Month
```

**Model Export Using Discoverer Worksheets**

ABM Analyzer contains a workbook that enables you to view and save data from an ABM model in the same format as the spreadsheet imports. This enables you to extract model data and structure for import to another model or separate ABM instance.

To extract the data, do either of the following:

- From Discoverer Plus, select **File**, then select **Save As**.
- From the Discoverer i-viewer, select **Export**. Then save the data to a tab-delimited file that is able to be reimported to ABM.

The system supports the following export files:

- Department Account Data
- Department Statistic Data
- Department Activity Account Data
- Department Activity Statistic Data
- Activity Rate Structure - only activity and driver relationship
- Cost Object Account Data - Non Cost Accounts
- Cost Object Account Data - Revenue Accounts
Model Export Using Discoverer Worksheets

- Cost Object Statistic Data
- Bill Header Data
- Bill Item Data
- Material Account Data - Cost Accounts
- Material Account Data - Non Cost Accounts
- Material Statistic Data
- Material Unit Cost Data

Using Specific Export Files

The following notes apply to specific export files.

**Department Activity Account Data**

This template exports only local cost element accounts.

**Cost Object Account Data**

- The noncost and revenue worksheets are separated to emphasize the fact that, to successfully import revenue accounts, you must create the model department accounts and set the cost type to revenue before importing the cost object account data or type revenue. If the model department account does not exist at the time of import, ABM creates the department account of type noncost. In addition, not null filters are applied to each sheet to retrieve only rows with non-null data.

- Cost object account data of type cost cannot be imported or entered through the interface. This is because the only way to create cost object account cost data is through the extended cost object unit cost calculation.

- The material account export is split between cost and noncost accounts. If the model department account does not exist at the time of import, ABM creates the account with a default of type cost. Also note that not null filters are applied to each sheet so as to retrieve only rows for non-null values.

- To export bill items, the option for display null as in the worksheet must be set to blank at the time of export.
Using Any Extract Worksheet

The following notes apply to all extract worksheets:

- When an item comprises multiple transactions for one or more origin codes, the amount exported is the net sum of the transactions. For example, an activity account can comprise an In transaction for 500 and an Out transaction for 500, resulting in a net export of zero.
- Data, but not structure, is exported. For example, if you have 15,000 model department accounts and only 10 have values, then only 10 are exported.
- Activity Hierarchy and Mapping Rules are not included.
- Data must be extracted in tab-delimited format for ABM to read it directly. Exports to Excel must first be converted to Excel 97 before importing.

The Bill Item Extract

Unit of Measure (UOM) cannot be added to a model during the import process. Add all necessary units of measure before beginning the import process.

Opening Export Workbooks

Do the following to open export workbooks:

1. Launch Discoverer Plus, then open the workbook named abmexpwk.
2. Select the worksheet for the data type to be exported.
3. Fill in the parameters, but do not rearrange any columns, change any formats, or add any totals. This is because the current column arrangement matches that of the spreadsheet imports.
4. From the File menu, select Export, and then select Tab-delimited format.
5. Save the file to any location you want.

Verifying and Saving Bill Item Worksheet Data

To verify or save bill item worksheet information, do the following:

1. Select Tools, then Options, then Sheet Format. Verify that the Display Null As options is set to blank.
2. Save any exported date to a column that is formatted as text. This is because the FIJ tool does not correctly parse fields defined in Excel as date.
In ABM, you can define attributes to sort and subtotal values on windows and reports. This chapter explains how to add attribute folders to a worksheet.

The ABM attribute entity types are as follows:

- Account
- Statistic
- Activity
- Driver
- Department
- Material
- Cost Object
- Department Account
- Department Statistic
- Department Activity
- Department Driver
- Data Source (Account, Statistic, and Driver collectively)
- Bill Item (Activity, Material, and Cost Object collectively)

Attributes and attribute values that are defined in ABM enable user-defined dimensions to be included in ABM reports. These are usable in the ABM Analyzer reports as separate dimensions for pivoting report layouts.
Creating Attributes and Attribute Values

The process of adding attributes to workbooks involves three main tasks:

1. Creating Attributes and Attribute Values
2. Creating Attribute Folders in the End User Layer
3. Using ABM Attributes in Reports

Creating Attributes and Attribute Values

You can create attributes and attribute values in ABM, and then assign the attributes to an ABM Analyzer business area. Access the attributes through the Edit Sheet wizard to add them to worksheets.

How to Create Attributes and Attribute Values

1. Log in to ABM as the system administrator.
2. Select Setup, then Attribute Options, then the Attributes node.
3. Click in the top half of the window, under Attributes.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Attribute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Type</td>
<td>Corporate, Strategic, Retail</td>
</tr>
<tr>
<td>Cost Type</td>
<td>Fixed, Partial, Variable</td>
</tr>
<tr>
<td>Service Type</td>
<td>Temp Work, Outsourced, Employee</td>
</tr>
</tbody>
</table>
4. Select **New** to create a new attribute type, and then select **Next**.
5. Enter the following values:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute ID</td>
<td>Enter an ID for your attribute.</td>
</tr>
<tr>
<td>Attribute Entity</td>
<td>Enter one of the ABM entity types: Accounts, Statistics, or Materials.</td>
</tr>
<tr>
<td>Description</td>
<td>Enter a description of the attribute.</td>
</tr>
<tr>
<td>Required</td>
<td>Select this field if a value is required for your attribute.</td>
</tr>
<tr>
<td>Lock Status</td>
<td>Leave this field unselected to make the attribute available for addition to your workbooks.</td>
</tr>
</tbody>
</table>

6. To create additional attributes, repeat steps 4 and 5.

7. When you are finished creating attributes, click Next.

8. In the Summary window, review the attributes that you created. Delete an attribute by highlighting it and clicking Delete.
9. Click Finish.

10. Click the bottom half of the window, under Attribute Values.

11. Click New, then Next.

12. Select the attribute to which a value will be assigned.

13. Enter a value and description for your attribute.

14. To create additional attribute values, repeat steps 12 and 13.

15. To create a new attribute, select New. Then follow the instructions in the wizard.

16. Click Next to display the summary window. Review your attribute values.

17. Click Finish.
Creating Attribute Folders in the End User Layer

There are three steps to loading an attribute view into the End User Layer (EUL). They are as follows:

- Create business views for attributes. This must be completed for all new attributes.
- Modify the end user layer.
- Add joins.

It is necessary to load an attribute view because each attribute type is added to a different set of business areas, and is joined to a different set of folders.

You must modify the end-user layer for each attribute that you want to add. For each attribute that you add, you must complete the following tasks:

1. Add the Attribute folder to the ABM Analyzer end-user layer.
2. Set the Folder Item Properties in Discoverer Administration Edition

After you have added all of your attributes to the ABM Analyzer end user layer, you can add joins in Discoverer Administration Edition.

Creating Business Views for Attributes

To include attributes in ABM Analyzer, you must run a script that creates attribute-specific business views. Follow this procedure:

1. Log in to SQL*Plus as the database user APPS.
2. To create the views for attributes, enter the following command at the SQL prompt:
   ```sql
   @<abmdir>\abmgen.sql
   ```
3. The script prompts you for two responses:
   a. At the Enter Tag Set Id or Return for all prompt, enter a specific attribute ID or press Return to select all attribute IDs.
   b. At the Enter taggable Entity Type, return for all prompt, enter a specific attribute type or press Return to select all attribute types. You can determine the valid list of attribute types by browsing the view named ABM_TAGGABLE_ENTITIES_I15_V.
Example: The Account attribute has an ID called TEST. Running the `abmgen.sql` script creates the business view `ABMFV_ACCOUNT_TEST_ATTR`. When you provide only taggable entity types, the system generates a set of business views based on entity types for all attributes specified in ABM. The `ABMFV_ACCOUNT_TEST_ATTR` business view is then included in the Available list when you load the schema object into a business area.

**Note:** Because of database column width limitations, the attribute column names are limited to 30 characters, 21 of which are system-generated. Therefore, when creating attributes in ABM for use in Discoverer, remember that the first nine characters of the Attribute ID must be unique.

---

**Add the Attribute Folder to the End User Layer**

To add an attribute folder instance to the end user layer, do the following:

2. Connect to the database as the end user layer owner.
3. Select the Open an Existing Business Area option from the dialog box.
4. Click OK.
5. Open the Departments, Activities, Cost Objects, and Materials business areas.
6. Right-click a business area that is associated with the attribute type of the attribute folder or folders being added.
7. Select the New Folder from Database option from the pop-up menu.
8. Select the Online dictionary option.
9. Click Next.
10. Select the user APPS from the Select the users you want to load list.
Creating Attribute Folders in the End User Layer

11. In the *Load user objects that match* field, enter `%ABMFV%ATTR`.

12. Click *Next*.

13. Select an attribute view from the *Available* list, then click the right-facing arrow to move it into the *Selected* hierarchy. Repeat this step to select additional views.

**Note:** The *Available* list contains all the ABM folder views available to be added to your ABM Analyzer workbooks. It should include any attributes that you created in ABM. Some attributes work within one business area while others do not.

14. Click *Next*.
15. In Step 4 of the Load Wizard, select and deselect the checkboxes as follows:

**Table 4–3 Load Wizard Check Boxes**

<table>
<thead>
<tr>
<th>Select</th>
<th>Deselect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalize names</td>
<td>Remove all column prefixes</td>
</tr>
<tr>
<td>Replace all underscores with spaces</td>
<td>Create joins from</td>
</tr>
<tr>
<td>Default aggregate on datapoints</td>
<td>Date hierarchies</td>
</tr>
<tr>
<td>SUM (from the Default aggregate on datapoints poplist)</td>
<td>:List of values for items of type</td>
</tr>
</tbody>
</table>

16. Click **Finish**.

17. Click the expansion sign to the right of the business area icon. This expands the business area into which you installed the new attribute folder.

18. Click the folder name and rename it. Follow the naming convention shown in **Table 4–4**.

**Table 4–4 Attribute Entities**

<table>
<thead>
<tr>
<th>Attribute Entity</th>
<th>Business Area</th>
<th>Attribute Folder Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>account</td>
<td>Departments</td>
<td>Account &lt;attribute_id&gt; Dept. Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Account &lt;attribute_id&gt; Activity Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Account &lt;attribute_id&gt; Material Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Cost Objects</td>
<td>Account &lt;attribute_id&gt; Cost Object Account Attributes</td>
</tr>
<tr>
<td>department account</td>
<td>Departments</td>
<td>Dept. Account &lt;attribute_id&gt; Dept. Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Dept. Account &lt;attribute_id&gt; Activity Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Dept. Account &lt;attribute_id&gt; Material Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Cost Objects</td>
<td>Dept. Account &lt;attribute_id&gt; Cost Object Account Attributes</td>
</tr>
<tr>
<td>statistic</td>
<td>Departments</td>
<td>Statistic &lt;attribute_id&gt; Dept. Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Statistic &lt;attribute_id&gt; Activity Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Statistic &lt;attribute_id&gt; Material Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Cost Objects</td>
<td>Statistic &lt;attribute_id&gt; Cost Object Statistic Attributes</td>
</tr>
</tbody>
</table>
### Table 4-4  Attribute Entities

<table>
<thead>
<tr>
<th>Attribute Entity</th>
<th>Business Area</th>
<th>Attribute Folder Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>department statistic</td>
<td>Departments</td>
<td>Dept. Statistic &lt;attribute_id&gt; Dept. Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Dept. Statistic &lt;attribute_id&gt; Activity Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Dept. Statistic &lt;attribute_id&gt; Material Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Cost Objects</td>
<td>Dept. Statistic &lt;attribute_id&gt; Cost Object Statistic Attributes</td>
</tr>
<tr>
<td>driver</td>
<td>Activities</td>
<td>Driver &lt;attribute_id&gt; Activity Rate Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Driver &lt;attribute_id&gt; Driver Attributes</td>
</tr>
<tr>
<td>Dept. driver</td>
<td>Activities</td>
<td>Dept. Driver &lt;attribute_id&gt; Activity Rate Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Dept. Driver &lt;attribute_id&gt; Driver Attributes</td>
</tr>
<tr>
<td>activity</td>
<td>Activities</td>
<td>Activity &lt;attribute_id&gt; Activity Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Activity &lt;attribute_id&gt; Activity Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Activity &lt;attribute_id&gt; Activity Rate Attributes</td>
</tr>
<tr>
<td>Dept. activity</td>
<td>Activities</td>
<td>Dept. Activity &lt;attribute_id&gt; Activity Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Dept. Activity &lt;attribute_id&gt; Activity Statistic Attribute</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Dept. Activity &lt;attribute_id&gt; Activity Rate Attributes</td>
</tr>
<tr>
<td>cost object</td>
<td>Cost Objects</td>
<td>Cost Object &lt;attribute_id&gt; Cost Object Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Cost Objects</td>
<td>Cost Object &lt;attribute_id&gt; Cost Object Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Cost Objects</td>
<td>Cost Object &lt;attribute_id&gt; Cost Object Unit Cost Attributes</td>
</tr>
<tr>
<td>materials</td>
<td>Materials</td>
<td>Material &lt;attribute_id&gt; Material Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Material &lt;attribute_id&gt; Material Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Material &lt;attribute_id&gt; Material Unit Cost Attributes</td>
</tr>
<tr>
<td>department</td>
<td>Departments</td>
<td>Department &lt;attribute_id&gt; RE Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Departments</td>
<td>Department &lt;attribute_id&gt; RE Statistic Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Department &lt;attribute_id&gt; Activity Account Attributes</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td>Department &lt;attribute_id&gt; Activity Statistic Attributes</td>
</tr>
<tr>
<td>resource</td>
<td>Cost Objects</td>
<td>Resource &lt;attribute_id&gt; Bill of Resources Attributes</td>
</tr>
</tbody>
</table>
19. Set the folder item properties in Discover Administration Edition. This is described in the next section, "Set the Folder Item Properties in Administration Edition".

20. Make copies of the completed attribute folder. Rename them as needed to create the attribute folders listed in Table 4-4.

**Set the Folder Item Properties in Administration Edition**

Before copying an attribute folder and moving it to a business area, set the folder item property to *Visible to user*. This property determines whether the item is visible to users viewing the folder in Discoverer User Edition.

*Table 4-5* lists the visible property for each item. Items are grouped by attribute type because the set of folder items is the same within an attribute type. This applies to all copies made.

**How to Set the Visible to User Property**

1. Double-click the new attribute folder to expand it.
2. Select all of the folder items whose *Visible to user* property must be set to *N*, as indicated in *Table 4-5*.
3. Select *Edit*, then *Properties*.
4. Set the *Visible to User* item attribute to *N*.

**Note:** Folder items with *Visible to User* set to *N* are unavailable.
### Table 4–5  Attribute Entity Types and Attribute Properties

<table>
<thead>
<tr>
<th>Attribute Entity Type</th>
<th>Attributes</th>
<th>Visible to User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account</td>
<td>Master List Sets Id</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Account Id</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Account Type Code</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Attribute Id</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Attribute Id</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Master List Set</td>
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### Table 4–5  Attribute Entity Types and Attribute Properties

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Joining Attribute Folders to Business Area Detail Folders

Each of the attribute folders you created when modifying the ABM Analyzer end user layer must be joined to a different business area detail folder. If the attribute folders have been renamed from the system-generated attribute folder name, then the last part of the attribute folder name may refer to the attribute folder detail folder. (This is true if the recommended folder names from table 4-4 have been used.)

To successfully join the attribute folder with the existing workbooks, you must create a join definition that links the master to the detail through the primary keys from each folder. Refer to Table 4–6 for definitions of the primary keys columns in the attribute folder, and the related key columns in the detail folders.

See the next section for instructions on creating the join definition for attributes. Note that you must use the Discoverer administration edition to create the join definitions.
How to Join Attribute Folders

1. Select one of the attribute folders that was created when modifying the ABM Analyzer end user layer.

2. From the menu, select **Insert**, then **Join**, and then **Multi-Item** from the Join dialog box.

3. By picking the view folder as the basis for the join, it will be listed as the first drop-down in the **master folders** column of the join dialog. Select the drop-down and pick the first row, which is the first key field for the join.

4. Select the detail folder from the drop-down list on the same line, and select the column that corresponds to the master folder selection.

   For example, if you selected `master list id` from the master folder, then pick `master list id` for the detail folder.

5. Repeat steps 1 through 4 for each required key field for the join. Additional rows for the join definition may be added with the "Add" button on the join dialog.

   See Table 4-6 for the list of keys required for each join.

6. When finished entering join relationships, select **Options** in the join dialog.

7. Select **Outer join on detail** and **Detail foreign key can have null values**. Then select **Ok** to close the options dialog.

8. Click **OK** to close the join dialog.

9. Select the new join definition that has been created in the master folder. This will be the attribute folder.

10. Select **Edit**, then **Properties**, from the menu.

11. Set the attribute **Detail Item Values** equal to **Might Not Exist in Master Folder**.

12. Set the attribute **Outer Join On** equal to **Detail Folder**.

13. Click **OK**.

**Note:** The join can also be created by selecting the base view as the master and then the attribute view as the detail. The results should be the same.
Table 4–6  Joining Attribute Folders to Business Area Detail Folders

<table>
<thead>
<tr>
<th>Attribute Type</th>
<th>Master Folder</th>
<th>Master Primary Key Item</th>
<th>Detail Folder</th>
<th>Detail Foreign Key Item</th>
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<td>Account</td>
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<td>Master List Sets Id Account Id Account Type Code</td>
<td>Dept. Accounts</td>
<td>Master List Sets Id Account Id Type Code</td>
</tr>
<tr>
<td></td>
<td>Dept. Account Tags</td>
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<th>Attribute Type</th>
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<th>Detail Folder</th>
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<th>Detail Foreign Key Item</th>
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                   Driver Id  
                   Driver Type Code  | Activity Rates  | Dept. Id Sets Id  
                   Driver Dept. Id  
                   Driver Id  
                   Driver Type Code  |
|                | Dept. Driver `<attribute_id>` Driver Tags            | Dept. Id Sets Id  
                   Dept. Id  
                   Driver Id  
                   Driver Type Code  | Drivers        | Dept. Id Sets Id  
                   Driver Dept. Id  
                   Driver Id  
                   Driver Type Code  |
| Activity       | Activity `<attribute_id>` Activity Account Tags      | Master Id Sets Id  
                   Activity Id  | Activity Accounts | Dept. Id Sets Id  
                   Activity  |
|                | Activity `<attribute_id>` Activity Statistic Tags     | Master Id Sets Id  
                   Activity Id  | Activity Statistics | Dept. Id Sets Id  
                   Activity  |
|                | Activity `<attribute_id>` Activity Rate Tags          | Master Id Sets Id  
                   Activity Id  | Activity Rates     | Dept. Id Sets Id  
                   Activity  |
| Dept. Activity | Dept. Activity `<attribute_id>` Activity Account Tags | Master Id Sets Id  
                   Dept. Act. Type Code  
                   Dept. Activity Id  | Activity Accounts | Dept. Id Sets Id  
                   Dept. Activity Type Code  
                   Dept. Activity Id  |
|                | Dept. Activity `<attribute_id>` Activity Statistic Tags | Master Id Sets Id  
                   Dept. Act. Type Code  
                   Dept. Activity Id  | Activity Statistics | Dept. Id Sets Id  
                   Dept. Activity Type Code  
                   Dept. Activity Id  |
|                | Dept. Activity `<attribute_id>` Activity Rate Tags    | Master Id Sets Id  
                   Dept. Act. Type Code  
                   Dept. Activity Id  | Activity Rates     | Dept. Id Sets Id  
                   Dept. Activity Type Code  
                   Dept. Activity Id  |
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<tr>
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<th>Master Primary Key Item</th>
<th>Detail Folder</th>
<th>Detail Foreign Key Item</th>
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<td>Master List Sets Id</td>
<td>CO Statistics</td>
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<td>Cost Object Id</td>
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<tr>
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<td>Cost Object &lt;attribute_id&gt; Unit Cost Tags</td>
<td>Master List Sets Id</td>
<td>CO Unit Costs</td>
<td>Master List Sets Id</td>
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<td>Cost Object Type Code</td>
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<td>CO Type Code</td>
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<td>Cost Object Id</td>
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<td>Cost Object Id</td>
</tr>
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<td>Master List Sets Id</td>
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<td>Master List Sets Id</td>
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<td>Master List Sets Id</td>
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<td>Material Id</td>
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<td>Material &lt;attribute_id&gt; Unit Cost Tags</td>
<td>Master List Sets Id</td>
<td>Material Unit Costs</td>
<td>Master List Sets Id</td>
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<td>Material Id</td>
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<td>Master List Sets Id</td>
<td>Dept. Accounts</td>
<td>Master List Sets Id</td>
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<td>Dept. Id</td>
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<td>Dept. Id</td>
</tr>
<tr>
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<td>Dept. &lt;attribute_id&gt; Statistic Tags</td>
<td>Master List Sets Id</td>
<td>Dept. Statistics</td>
<td>Master List Sets Id</td>
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<td>Dept. Id</td>
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<td>Dept. Id</td>
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<td>Master List Sets Id</td>
<td>BOR</td>
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<td>Resource Type Code</td>
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<td>Child Type Code</td>
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<td></td>
<td></td>
<td>Resource Id</td>
<td></td>
<td>Child Resource Id</td>
</tr>
</tbody>
</table>
Using ABM Attributes in Reports

After the system administrator adds attribute folders to the business areas, you must add attributes to a worksheet.

**How to Add Attributes to Your Worksheet**

2. Select File, then **Connect to Database** to reconnect to the database.
3. Select and open a worksheet.
4. Select Sheet, then **Edit Sheet** from the top menu.
5. Select an attribute folder in the Available column.
6. Add the folder to the worksheet by clicking the right-facing arrowhead button.
7. In the worksheet, remove items in the folder that are being replaced by the attribute value.
8. From the **Edit Sheet** menu, select **Crosstab Layout**.
9. Use the Crosstab Layout function to move the attribute to the row axis.
10. Click **OK** to run the query.
This chapter describes the ABM security model and its effect on ABM Analyzer. The chapter contains the following sections:

- The ABM Security Model
- ABM Analyzer Security
- Business Area Privileges

**The ABM Security Model**

The ABM security model protects data and objects. When you are assigned a responsibility, you inherit the associated master list and model profile. You can have more than one responsibility.

The extent of your access to data depends on the security model profile for your assigned responsibility. If other users have similar model profiles, then they could access the same objects while accessing the same or different data.
The following chart illustrates the ABM security model.

Administrators use Discoverer Administration Edition to map users to business areas and to assign business area privileges such as workbook scheduling and grant workbook.

For more information about the ABM security model, see Oracle ABM User Guide.

**ABM Analyzer Security**

ABM Analyzer security is tied to the ABM security model. ABM security is tied to the model and object level. Consequently, what you are accessing in ABM Analyzer are the ABM model objects that your responsibility can access. To put it another way, when you are mapped to ABM Analyzer workbooks, your ABM security profile determines the workbook data that you can access.
Example

Suppose that Tom, an ABM Analyzer user, has been mapped to the ABM user MPLS Plant Manager, who only has access (with view or update status to a securable object) to the Minneapolis model Department accounts (through the Model Dept. Accounts securable object of profile type Model) and the G/L Actual period account data (through the Account Data securable object of profile type Data Set).

When Tom opens the Dept. Account worksheet, he sees only the department account data for the Minneapolis model and the G/L Actual data sets. Tom is restricted from viewing department account data for any other data sets or model.

Securable Objects

Table 5–1 relates each folder in the standard worksheets to one or more ABM securable objects. For example, the Dept. Account worksheet in the Department workbook includes two folders, Department Accounts and Department Account Data Sets, that can be viewed in the Edit Sheet wizard.

Note: Select Sheet, then Edit Sheet, to open the Edit Sheet wizard.

To illustrate how to interpret Table 5–1, suppose you revoked access to the securable object Model Dept. Accounts for the profile type Model in ABM. The associated ABM Analyzer user cannot access the model department account data of the profile’s related models in the Dept. Account worksheet.

<table>
<thead>
<tr>
<th>Standard Folders</th>
<th>Profile Types</th>
<th>ABM Securable Objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. Accounts</td>
<td>Model, DS</td>
<td>Model Dept. Accounts, Account Data</td>
</tr>
<tr>
<td>Dept. Statistics</td>
<td>Model, DS</td>
<td>Model Dept. Statistics, Statistic Data</td>
</tr>
<tr>
<td>Data Sets</td>
<td>Model</td>
<td>Data Sets</td>
</tr>
<tr>
<td>Activity Accounts</td>
<td>Model, DS</td>
<td>Activity Dept. Accounts, Activity Account Data</td>
</tr>
<tr>
<td>Activity Statistics</td>
<td>Model, DS</td>
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</tr>
<tr>
<td>Drivers</td>
<td>Model, DS</td>
<td>Model Dept. Drivers, Driver Data</td>
</tr>
<tr>
<td>Driver Sources</td>
<td>Model, DS</td>
<td>Model Dept. Drivers, Driver Data</td>
</tr>
</tbody>
</table>
Business Area Privileges

You can grant or revoke specific business area privileges, such as the ability to format, schedule, and access workbooks, through Discoverer Administration Edition.

There are two seeded responsibilities in ABM:

- ABM Supervisor, the administrator’s responsibility
- ABM Manager, the responsibility that the administrator must assign to each user requiring system access through Self-Service Web Applications.

For more information on this topic, see the *ABM Installation Guide*.
How to Grant or Revoke Business Area Privileges

1. Define users or responsibilities, and map responsibilities to master list and model profiles in ABM. This determines which models and data sets a responsibility can access or modify.

2. Install and configure the ABM Analyzer end user layer, business areas, and workbooks. For more information, see the ABM Installation Guide.

3. Log in to Discoverer Administration Edition as the end user layer owner.

4. Select Tools, then Privileges. The Privileges dialog appears.

5. Select a user or responsibility from the pull-down menu.

6. Select administrative and user privileges from the Privilege list.

7. Click OK to apply your changes.
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