Oracle® Marketing Segmentation Guide

Version 11.1.1.3.0

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1 What's New in This Release

What's New in Oracle Marketing Segmentation Guide, Version 11.1.1.3.0

Table 1 lists changes described in this version of the documentation to support release 11.1.1.3.0 of the software.

Table 1. What's New in Oracle Marketing Segmentation Guide, Version 11.1.1.3.0

Topic	Description
Table 2 on page 12	Added specific 11g configuration keys.
Writing List Output to Multiple Tables on page 17	Added a section about how to write list output to multiple tables.
Writing List Files to Oracle Content Server on page 17	Added a section about how to write list files to Oracle Content Server.
To set contact planning rules on page 21	Added the procedure to set contact planning rules.
getPromptedColumns Method on page 37	Added new SOAP call method.
To set options, headers, and footers for list export formats on page 43	Added content server repository options for list export format.
To analyze Marketing XML for marketing objects on page 110	Added a procedure to analyze Marketing XML for marketing objects.
Throughout guide	Updated text, book titles, product references and icon images to reflect modified user interface (UI) design.

2 Installing and Administering Segmentation and List Generation

This chapter describes how to install and administer segments and lists. It includes the following topics:

- Installation Guidelines for the Marketing Module on page 9
- About Mapping Segmentation Metadata on page 9
- Setting Up Marketing Module Parameters in Oracle BI on page 10
- SOAP Calls for Marketing on page 21

Installation Guidelines for the Marketing Module

To install the segmentation and list generation (Marketing module), you must install Oracle's Siebel Analytics version 7.7.1 or later, or Oracle Business Intelligence 10*g* release or later. In this guide, the term Marketing module refers to the module within the Oracle Presentation Services server that supports segmentation and list generation.

NOTE: Oracle's Siebel Analytics platform has been renamed to Oracle Business Intelligence Enterprise Edition. For versions higher than Siebel Analytics version 7.8.x, information is posted using a new version numbering system, for example, as Oracle Business Intelligence Enterprise Edition v10.1.3.2.1 or higher.

For installation instructions, see *Oracle Fusion Middleware Installation Guide for Oracle Business Intelligence Enterprise Edition*. For information about updating default repository and connection settings, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

About Mapping Segmentation Metadata

Segmentation identifies a group of targets for applying a marketing treatment. Typically, targets are individuals, businesses, bank accounts, or households but they can be any dimensional entity in the database such as Opportunities or Assets. Use the marketing segmentation user interface to specify criteria that groups targets based on behavior patterns. The Segmentation Metadata specifies this criterion and is composed of the following entities:

- Cache
- Conforming dimensions
- Qualified list items
- Sampling factors

- Saved Result Sets
- Segmentation catalogs
- Target levels

For instructions about how to create Oracle Business Intelligence metadata, see *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition.* When you have created the metadata, you must test the integrated environment.

If you customize your data warehouse with a new column and you want Marketing to access the new column, make sure that the column is exposed in all three layers of the BI repository. For more information, see "Setting Up Marketing Segmentation Metadata" on page 70.

Setting Up Marketing Module Parameters in Oracle BI

This section contains the following topics:

- Verifying Database Privileges for the Marketing Module on page 10
- Setting Permissions for Marketing Server Groups on page 11
- Administering Configuration Keys for the Marketing Module on page 12
- Managing Marketing Jobs on page 16
- Managing Marketing Defaults on page 20

Verifying Database Privileges for the Marketing Module

The Segmentation and List Generation functions of the Marketing module use write-back capabilities for internal functions such as cache and saved result sets. For security reasons, the administrator can set up a second writable connection pool for the cache and saved result set database whose login and password has database privileges to create tables and write back to the database. Contact your database administrator to verify that the user has these privileges.

To verify that write back has been set up properly

1. In Target Levels, in Saved Result Sets, verify that the connection pool used for the physical SQL permits writeback.
2. In Qualified List Items, in Cache Information, verify that the connection pool used for the physical SQL permits writeback.
3. In User/Group Permissions, for Query Limits for the segmentation database, set Populate Privilege to Allow.

   NOTE: You do not have to set Populate Privilege to Allow, if you select the Allow populate queries by default check box in the General tab.

Setting Permissions for Marketing Server Groups

Specify the Web Catalog folders for segments, segment trees, list formats, and filters to which each user or Web group can access. To provide visibility to functions of the Marketing module, perform the following tasks:

- Specify the users and groups that are allowed to have access to the Segment Designer, Segment Tree Designer, and List Format Designer. For instructions about creating Users and Groups for BI and managing access to Web Catalog folder, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.
  - After the users and groups are created, navigate to the Administration - Marketing screen, select Marketing Server Admin, and then select Manage Privileges.
  - In Manage Privileges, designate which users and groups have permission to access and perform each privilege listed. For instructions about managing privileges for BI users, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.
- Establish the Web users and groups that must have access to display each BI Catalog folder. For instructions about managing the Web Catalog and permissions, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.
- In the BI Repository, verify which groups have permission to each Target Level, Segmentation Catalog, and Presentation Column.

To set permissions for Marketing Server Groups

1. Log in to Oracle BI as an administrator.
2. In the Oracle BI application, click the Admin link.
3. In the Oracle BI Administration page, click Manage Privileges.
4. In the Access row, allow access by the appropriate groups to the following parts of the Marketing module:
   a. Access Segment Designer
   b. Access Segment Tree Designer
   c. Access List Format Designer
5. In the List Formats row, specify which user groups can perform each action.
6. In the Segmentation row, specify which user groups can perform each action.

Administering Configuration Keys for the Marketing Module

Settings for the segmentation and list generation functions of the Oracle BI Presentation Services are contained in a configuration file named instanceconfig.xml. The configuration keys in this file control path names for the Marketing File System, logging levels, and other properties. Table 2 shows some of the configuration keys that apply to the Marketing module. For a complete explanation of configuration keys and how to edit the instanceconfig.xml file, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

Table 2. Marketing Parameter Default Settings

10*g* Release Configuration Key	11*g* Release Configuration Key	Default Value	Description
MarketingCacheMaxEntries	MaxEntries	500	Maximum number of database cache entries.
-	CleanupFrequencyMinutes	60	Performs a cleanup of the cache every 60 minutes.
MarketingCacheMaxExpireMinutes	MaxAgeMinutes	1440	Maximum time that a database cache entry can exist before it is expired and removed.
MarketingDataValidation	DataValidation	False	Replaces control characters in the column data with spaces. If this parameter is set to true, control characters in the column data whose ASCII value is less than 32, such as the carriage return and the line feed characters, are replaced by spaces before writing out to any list files.
MarketingEnableNodeProfiling	EnableNodeProfiling	True	Enables or disables the hyperlink to the profile dashboard from counts in the Segment Designer and Segment Tree Designer.
MarketingFileEncoding	FileEncoding	UTF8	Character set encoding of the List Format files generated.

Table 2. Marketing Parameter Default Settings

10*g* Release Configuration Key	11*g* Release Configuration Key	Default Value	Description
MarketingFileSystem	FileSystem	\\<hostname>\Lists\	File system path used by Siebel Marketing to store output list files. This path must be accessible to the BI Presentation Services, must have write permissions for the user under which BI Presentation Services is started, and must end with a backslash. The Marketing transactional application must use the same location as the Marketing File System. In the following situations, BI Presentation Services must have access to the path specified in the MarketingFileSystem parameter: ■ In an environment in which Siebel Enterprise Server and BI Presentation Services are running on the same platform (homogenous), this path matches the Marketing File System server parameter. ■ In an environment in which Siebel Enterprise Server and BI Presentation Services are not running on the same platform (heterogeneous), the Siebel File System must be made visible to BI Presentation Services by running a third-party application (such as Samba) where the Siebel File System resides and by exporting this path such as in the following example: /export/home/Siebel/filesystem (BI Presentation Services running on UNIX)

Table 2. Marketing Parameter Default Settings

10*g* Release Configuration Key	11*g* Release Configuration Key	Default Value	Description
MarketingJobsLogDetailLevel	JobsLogDetailLevel	1	Amount of debugging information saved for each job. 0 : No Details 1 : SQL Execution Manager 2 : SQL Execution Manager Ordering 3 : Cache Management Details 4 : Internal SqlNodes structures 5 : Internal RqtNodes structures 6 : Object XMLs
MarketingJobsLogSize	JobsLogSize	100	Maximum number of jobs in the job history log. After the maximum is reached, the oldest 25% of jobs are expired and removed.
MarketingJobsWaitSeconds	JobsWaitSeconds	20	Duration between successive checks on the status of a Marketing job run from the User Interface. The jobs include Segment Counts, Segment Tree Counts, Saved Result Set Creation (in the Segments user interface or the Segment Trees user interface) and Purge and List Format Preview/List Generation. The wait-refresh cycles keep the browser from timing out while waiting for the jobs to complete.
MarketingPreviewPath	PreviewPath	\\<hostname>\Lists\Preview\	File system path where preview and output list files are written.

Table 2. Marketing Parameter Default Settings

10*g* Release Configuration Key	11*g* Release Configuration Key	Default Value	Description
MarketingPreviewSize	PreviewSize	500	Number of default records shown in the List Format Designer when a user selects Generate Preview. This parameter can be overridden by the end users in the Preview user interface by entering a different preview size in the Preview Parameters dialog box.
MarketingUseBOM	UseBOM	True	Controls writing of the Byte Order Mark (BOM) characters at the beginning of list files. Typically, applications see BOM characters to identify the encoding of the data. ■ When set to true, BOM characters are inserted at the start of the list file, identifying the character encoding used in the file. ■ When set to false, the BOM characters are not written. ■ If you set the character set encoding to ANSI then no BOM is written.
MarketingWrapColumnHeaders	WrapColumnHeaders	True	Applicable only when files are being written out in the Delimited format and when a Text Qualifier is specified. ■ When the default value is true, the column headers are wrapped using the text qualifiers specified in the List Format Options tab. ■ When the default value is false, column headers are not wrapped.
-	URL	http://hostname.com:port/	The Uniform Resource Locator (URL) from where to access the content server.

Table 2. Marketing Parameter Default Settings

10*g* Release Configuration Key	11*g* Release Configuration Key	Default Value	Description
-	FileSizeMB	3	Sets a limit to the content server file size, in mega bytes.
-	SocketTimeoutSec	60	Specifies the number of seconds that the socket waits for the Content Server to respond while transferring records. The default value is 60.

Managing Marketing Jobs

The Manage Marketing Jobs console displays the status and details of each segmentation or list generation request running on the BI Presentation Services. To display the details of a request, click the Details link in the Action column for the job.

You can also display the current database cache for any Qualified List Items accessed by a segment or segment tree request. To display the details for the cache, click Details in the Action column for the cache entry. To purge the cache, click the Purge link in the Action column for the cache entry.

NOTE: The Purge link next to each cache entry row purges existing cache entries for the user who created the entry.

To view marketing jobs

1. In the Oracle BI Administration page, click Manage Marketing Jobs.
2. The top section displays marketing jobs. The bottom section displays cache entries. The following table describes the types of marketing jobs.

Marketing Job	Description
Get Counts	Represents a segment or segment tree count submitted through the Segment Designer, Segment Tree Designer, or SOAP API. For the Segment Designer, a count request within the Edit Criteria Block dialog box appears. The name of the segment or tree is always displayed in the information column.
Write List Files	Represents a list generation job for full output list generation or preview. The information field contains the list format name as well as the location where the output files are written.
Write Saved Result Set	Represents the saving of either a segment result set or a segment tree cell result set. The name of the segment or tree is always displayed in the information column.
Delete Saved Result Set	Represents the deleting of a segment result set. The name of the segment or tree is always displayed in the information column.

Marketing Job	Description
Purge Cache	Represents the user action of deleting cache result sets. This job type includes purging all caches, purging all caches for a specific user, purging cache for a specific segment, and purging cache for a specific tree.
Prepare Cache	Represents the user action of preparing a segment cache or a segment tree cache for list export.
Get Prompted Columns	Represents the user action of returning prompted columns for a segment or a segment tree.

Writing List Output to Multiple Tables

Writing list generation output to multiple tables is supported in release 11.1.1.3.0 of the software.

The multiple database insert statements are generated with a common select clause from the list format columns. The list format is created with database repository option selected in the list format Options tab and by adding appropriate destination table.column database field names in the Alias column property of all list format columns.

The following check boxes are available from the list format Options tab:

- Generate write-back count: Add write-back count for each table in the job output.
- Include duplicate records: Add or remove DISTINCT clause in the common select statement.

In some situations, for every member in a segment, one record should be created in some tables and multiple records in other tables. This is achieved by enabling the Multiple System Attribute Values property for the appropriate list format columns. The multiple values are passed through System Attributes data as comma separated values at run time.

To generate unique numeric row ids for any column in a table, use the ROW_NUM_ID system attribute in the list format column formula.

Writing List Files to Oracle Content Server

This feature allows writing of list files output to a configured Oracle Content Server repository.

The response from the content server is a contentId which is stored in the marketing job details and can be used for getting saved file data from the content server. The list format should have Content Server option enabled in the options tab with appropriate parameters.

The following fields in List format Options tab are applicable in the content server section:

- Content check-in type: The type of the file. These types are predefined on the content server.
- Security group: The security group is a set of files with the same access permission.
- Title: A descriptive name identifying the list file.
- Account: An Account can be accessed by users having Account access permissions.

The Content Server connection and authentication details are configured using Enterprise Manager user interface UI. For more information about configuring connections to the Marketing Content Server, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

Using Job Action Links

The following is a list of action links:

- **Cancel.** All marketing jobs can be cancelled by clicking the Cancel action link. If a job is in the middle of a long-running operation, such as running a set of Oracle BI Server queries, the job issues SQLCancels to cancel all queries. While the BI Server is processing the cancel, the job state shows Running (Cancelling). After all queries have been cancelled, the job state updates the value to Cancelled.
- **Cancel All.** Cancels all running jobs.
- **Detail.** Each job record also includes a Detail link which includes real-time information about the progress of the job. This log contains basic job statistics as well as detailed information specific to the job:
  - For count, write saved result set, and write list file jobs, the log includes the query plan used to generate the logical SQL and SQL results and timings.
  - For delete saved result sets, the log includes the logical delete statements on the header and data tables.
  - For write list files, the log includes the constrained list items qualified by the list and the list SQL.

Creating a Log File of Marketing Job Information

To save the information about marketing jobs status that is available in the Manage Marketing Jobs console, you can configure the logconfig.xml file to create a log file.

To add marketing job data to the log file

1. Open the logconfig.xml file in the AnalyticsData\web\config directory.
2. In the last line of the file, change the logging level for information to 100, as follows:

```
<FilterRecord writerClassGroup="File" path = "saw.mktgsqlsubsystem.joblog"
information="100" warning="100" error="100" security="41"/>
```

To isolate marketing logs into a separate file

1. Open the logconfig.xml file in the AnalyticsData\web\config directory.
2. Add the following lines below the <Writers> section:

```
<Writer implementation="FileLogWriter" name="Marketing Job Logger"
writerClassId="5" dir="{%SADATADIR%}/web/log" filePrefix="mktglog"
```

```
maxFileSizeKb="10000" filesN="10" />
```

3 Below the <WriterClassGroups> section, add the following line:

```
<WriterClassGroup name="Marketing">5</WriterClassGroup>
```

4 Below the <Filters> section, change the writerClassGroup to "Marketing" as follows:

```
<FilterRecord writerClassGroup="Marketing" path =
"saw.mktgsqlsubsystem.joblog" information="100" warning="100" error="100"
security="
```

Managing Cache in the Marketing Jobs Console

The Marketing Jobs console displays a list of the active Marketing cache for users of the Marketing module.

The cache entries can be seen under the Database Cache heading in the Marketing Jobs view. For each cache entry, the following information is provided:

- **Qualified List Item.** QLI for which the IDs were cached. This cache must be enabled for creating random split segments.
- **User.** User who submitted the Marketing job responsible for generating the cache.
- **Sampling Context.** Sampling factor used for the request, as indicated in the Segment Designer or Segment Tree Designer.
- **Created.** Date the cache entry was created.
- **Last Accessed.** Most recent time the cached was accessed by a job.
- **Expiration.** Date the cache entry expires.
- **Time to Create.** Time required to create the cache entry.
- **Action.** Used by the administrator to View Details for the entry or Purge all Cache entries for a user.
- **GUID.** Global Unique ID for the Cache entry. This ID is written to the Cache header table for each entry.

The administrator can use the console to manually purge cache entries, using one of the following approaches:

- The Purge All Cache link beneath the Database Cache heading purges all current caches.

  NOTE: When scheduling a campaign stage execution and setting the frequency to Non-Recurring, there is no purge cache task created in the Manage Marketing jobs section. This is expected behavior as Purge Cache is only invoked for recurring requests.

- The Purge Cache link in the Action column for a cache entry purges all Cache entries for a user.

  NOTE: This link purges all cache for that user, not just the entry for the link.

Managing Marketing Defaults

The Marketing Defaults page controls the default system parameters for segment and segment tree requests. Each parameter is set for each target level. You can set the following global defaults:

- **Default Campaign Load File Format.** This option sets the default campaign load format for any new segment or segment tree request. When a user creates a new segment or segment tree, you can view this parameter on the Advanced page in the Segment Designer or Segment Tree Designer.
- **Default List Export File Format.** This option sets the default list format value that is used by the Generate List button on the Segment Designer, and the Generate List menu option on a segment tree branch. This parameter allows the user to generate an output file of actual results from a segment while building segment criteria. The user can override the default value on the Segment Advanced tab if the user wants to use a different list format.
- **Default Saved Result Set File Format.** This option is used to populate the columns of information for each segment member when storing a saved result set.
- **Profile Dashboard.** This option controls the dashboard that appears when users click the Counts link in the Segment Designer or Segment Tree Designer.

The Contact Planning Rules view contains a check box called Enforce Contact Planning Rules in Segment Designer. When this check box is selected, the Global Audience for each Target Level appears at the bottom of any segments created in the Segment Designer.

Setting Global Marketing Defaults

This section describes how to set global defaults for campaign load formats, segments, or dashboards. It also describes how to set contact planning rules.

To set global marketing defaults

1. Go BI and click the Administration link.
2. In the Oracle BI Administration page, click the Manage Marketing Defaults tab.

   Target levels appear in the first column.
3. For each Target Level, perform the following steps:
   a. In the Default Campaign Load File Format, click Browse and select the default format for new segments and segment trees.
   b. In the Default Saved Result Set File Format, click Browse and select the default saved result set file format for new segments and segment trees.
   c. In the Default List Export File Format, click Browse and select the default list export file format that you want to use.
   d. In the Profile Dashboard field, click Browse and select the default report that appears when the user clicks the hyperlinked counts in the Segment Designer or Segment Tree Designer.

To set contact planning rules

1. Go to BI and click the Admin link.
2. In the Oracle BI Administration page, click the Contact Planning Rules tab.
3. Select Enforce Contact Planning Rules in Segment Designer to ensure that the Global Audience for each Target Level appears at the bottom of any segments created in the Segment Designer.

   You can setup a segment path as Eligible Audience for each category (for example, Channel) and related type (for example, Email) for any target level as well as a global audience for any target level irrespective of any category or type.
4. For each Target Level, perform the following steps:
   a. In the Global Audience category, click Browse to select the segment to be used as the Global Audience for any new segments or segment trees created using that target level. Users can not remove Global Audiences from their segment or segment tree criteria.
   b. In the Organization category, click Browse to select the rule to map the organization category and related type for new segments and segment trees.
   c. In the Channel category, click Browse to select the rule to map the channel category and related type for new segments and segment trees.

SOAP Calls for Marketing

SOAP calls are available to Marketing for the purpose of customizing segmentation and list generation. Most SOAP calls are documented in the *Oracle Fusion Middleware Integrator's Guide for Oracle Business Intelligence Enterprise Edition*. The following SOAP calls are specific to Marketing:

- "deleteResultSet Method" on page 21
- "getCounts Method" on page 23
- "prepareCache Method" on page 27
- "purgeCache Method" on page 28
- "saveResultSet Method" on page 29
- "writeListFiles Method" on page 31
- "getPromptedColumns Method" on page 37

deleteResultSet Method

This method deletes one or more saved result sets of target level objects identified by a list of GUID values belonging to a segment.

API Definition

Method

```
<binding name="JobManagementService" type="i0:JobManagementServiceSoap">
   <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"
/> <operation name=" deleteResultSet ">
      <soap:operation soapAction="#deleteResultSet" style="document" />
      <input>
         <soap:body use="literal" />
      </input>
      <output>
         <soap:body use="literal" />
      </output>
   </operation>
</binding>
```

Method Input

```
<xsd:element name=" deleteResultSet ">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="targetLevel" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="GUIDs" type="sawsoap:arrayOfGUIDs" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="segmentPath" type="xsd:string" minOccurs="1"
maxOccurs="1" />
         <xsd:element name="deleteOption" minOccurs="0" maxOccurs="1" default="all"
/>
            <xs:simpleType>
               <xs:restriction base="xs:string">
                  <xs:enumeration value="mostRecent" />
                  <xs:enumeration value="oldest" />
                  <xs:enumeration value="all" />
               </xs:restriction>
            </xs:simpleType>
         <xsd:element name="sessionID" type="xsd:string" minOccurs="0"
maxOccurs="1" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>

<xsd:complexType name="arrayOfGUIDs">
   <xsd:sequence>
      <xsd:element name="GUID" type="xsd:string" minOccurs="0"
maxOccurs="unbounded" />
   </xsd:sequence>
</xsd:complexType>
```

Method Output

```
<xsd:element name="deleteResultSetResult">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="jobInfo" type="sawsoap:JobInfo" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>
```

Valid Usage Scenarios

Deletes one or more saved result sets of target level objects identified by a list of GUID values belonging to a segment.

```
<deleteResultSet>
   <targetLevel>[target level the saved result set contains]</targetLevel>
   <GUIDS>
      <GUID>[GUID value for saved result set 0]</GUID>
      <GUID>[GUID value for saved result set 1]</GUID>
      …
      <GUID>[GUID value for saved result set N]</GUID>
   </GUIDS>
   <segmentPath>[path to the segment]</segmentPath>
</deleteResultSet>
```

Usage Options

None.

getCounts Method

The getCounts method generates the count numbers for either a segment or a segment tree. Thus, the segmentPath element must be specified in the getCounts element when getCounts is performed on a segment. Otherwise, the treePath element must be specified in the getCounts element when getCounts is performed on a segment tree. Anything else results in an error.

API Definition

```
<xsd:element name="getCounts">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="segmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="treePath" type="xsd:string" minOccurs="0" maxOccurs="1"
/>
         <xsd:element name="segmentationOptions"
type="sawsoap:SegmentationOptions" minOccurs="0" maxOccurs="1" />
         <xsd:element name="sessionID" type="xsd:string" minOccurs="0"
maxOccurs="1" />
```

```
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>

<xsd:complexType name="SegmentationOptions">
   <xsd:sequence>
      <xsd:element name="removeCacheHits" type="xsd:boolean" default="false"
minOccurs="0" maxOccurs="1" />
      <xsd:element name="countOverride" type="sawsoap:OverrideType"
default="Default" minOccurs="0" maxOccurs="1" />
      <xsd:element name="cacheOverride" type="sawsoap:OverrideType"
default="Default" minOccurs="0" maxOccurs="1" />
      <xsd:element name="samplingFactor" type="xsd:decimal" default="100"
minOccurs="0" maxOccurs="1" />
      <xsd:element name="prompts" type="xsd:namevaluepair" minOccurs="0"
maxOccurs="unbounded" />
      <xsd:element name="govRules" type="xsd:namevaluepair" minOccurs="0"
maxOccurs="unbounded" />
   </xsd:sequence>
</xsd:complexType>
```

Valid Usage Scenarios

Calculates the count numbers for the segment.

```
<getCounts>
   <segmentPath>[path to the segment]</segmentPath>
   <segmentationOptions>
      <countOverride>All</countOverride>
      <prompts>
            <name>[P0_name]</name>
            <value>[P0_value]</value>
      </prompts>
      <prompts>
            <name>[P1_name]</name>
            <value>[P1_value]</value>
      </prompts>
…
      <prompts>
            <name>[PN_name]</name>
            <value>[PN_value]</value>
      </prompts>
      <govRules>
            <name>[GR0_name]</name>
            <value>[GR0_value]</value>
      </govRules>
      <govRules>
            <name>[GR1_name]</name>
            <value>[GR1_value]</value>
      </govRules>
…
      <govRules>
            <name>[GRN_name]</name>
            <value>[GRN_value]</value>
```

```
        </govRules>
      </segmentationOptions>
   </getCounts>
```

Calculates the count numbers for the segment tree.

```
   <getCounts>
      <treePath>[path to the segment tree]</treePath>
      <segmentationOptions>
         <countOverride>All</countOverride>
         <prompts>
             <name>[P0_name]</name>
             <value>[P0_value]</value>
         </prompts>
         <prompts>
             <name>[P1_name]</name>
             <value>[P1_value]</value>
         </prompts>
     …
         <prompts>
             <name>[PN_name]</name>
             <value>[PN_value]</value>
         </prompts>
         <govRules>
             <name>[GR0_name]</name>
             <value>[GR0_value]</value>
         </govRules>
         <govRules>
             <name>[GR1_name]</name>
             <value>[GR1_value]</value>
         </govRules>
     …
         <govRules>
             <name>[GRN_name]</name>
             <value>[GRN_value]</value>
         </govRules>
      </segmentationOptions>
   </getCounts>
```

Usage Options

Segmentation options are used by getCounts to override the default options specified for the segment or segment tree in Marketing BI. The usage options for the GetCounts operation are count override, remove cache hits, sampling factor, prompts and govRules. These options are specified within the segmentationOptions element.

countOverride

Possible values are:

- All
- Default (default value)

- None

The countOverride value must be set to "All" to execute getCounts SOAP method. "All" specifies that count numbers are calculated for all criteria blocks. Otherwise executing getCounts results in an error.

removeCacheHits

Possible values are:

- false (default value)
- true

Usually cache entries are refreshed with the latest information when cache entries are expired or does not exist. But set removeCacheHits to true for getCounts to ensure that you query against the most current data. This is achieved by removing all existing cache entries that contain count information for the target segment or segment tree and repopulating the cache with new count number entries calculated by getCounts.

samplingFactor

Possible values are:

- 100 (default value)
- 0 to 100

The getCounts calculates the count number of criteria blocks against a subset of the data determined by the samplingFactor value. The default value of 100 determines that the count number is calculated against the entire data set. Set the samplingFactor to indicate the size of the data set for calculating counts.

Prompts

Possible values are 0 to unbounded.

Prompts do not have any namevaluepair element by default when not specified in segmentationOptions or when segmentationOptions is not specified.

Values sent through prompts for corresponding prompted columns in segment/trees are used to filter data when generating counts. If columns in segment are prompted and corresponding values are not sent, no filter criteria are applied.

govRules

Possible values are 0 to unbounded.

govRules do not have any namevaluepair element by default when not specified in segmentationOptions or when segmentationOptions is not specified.

Values sent through govRules namvaluepairs enforce corresponding contact planning rules for the segment. For more information on contact planning rules, see “Manage Marketing Contact Planning Rules” on page 125.

prepareCache Method

The prepareCache method caches a segment or a segment tree for list export.

API Definition

```
<xsd:element name="prepareCache">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="segmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="treePath" type="xsd:string" minOccurs="0" maxOccurs="1"
/>
         <xsd:element name="refresh" type="xsd:boolean" default="false"
minOccurs="0" maxOccurs="1" />
         <xsd:element name="sessionID" type="xsd:string" minOccurs="0"
maxOccurs="1" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>

<xsd:complexType name="treeNodePath">
   <xsd:sequence>
      <xsd:element name="treePath" type="xsd:string" minOccurs="1" maxOccurs="1" />
      <xsd:element name="treeNodePriority" type="xsd:string" minOccurs="0"
maxOccurs="1" />
      <xsd:element name="treeNode" type="xsd:string" minOccurs="0" maxOccurs="1" />
   </xsd:sequence>
</xsd:complexType>
```

Valid Usage Scenarios

Caches the segment for list export.

```
<prepareCache>
   <segmentPath>[path to the segment]</segmentPath>
</prepareCache>
```

Caches the segment tree for list export.

```
<prepareCache>
   <treePath>[path to the segment tree]</treePath>
</prepareCache>
```

Usage Options

None.

purgeCache Method

The purgeCache method purges the entire cache, purges entries for a segment from the cache, or purges entries for a segment tree from the cache. If the node specified is a non-leaf node then the cache for all its children leaf nodes is purged.

API Definition

Method

```
<binding name="JobManagementService" type="i0:JobManagementServiceSoap">
   <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document"
/> <operation name="getCounts">
      <soap:operation soapAction="#purgeCache" style="document" />
      <input>
         <soap:body use="literal" />
      </input>
      <output>
         <soap:body use="literal" />
      </output>
   </operation>
</binding>
```

Method Input

```
<xsd:element name="purgeCache">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="segmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="treePath" type="sawsoap: treeNodePath" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="ignoreCacheRef" type="xsd:boolean" default="false"
minOccurs="0" maxOccurs="1" />
         <xsd:element name="sessionID" type="xsd:string" minOccurs="0"
maxOccurs="1" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>

<xsd:complexType name="treeNodePath">
   <xsd:sequence>
      <xsd:element name="treePath" type="xsd:string" minOccurs="1" maxOccurs="1" />
      <xsd:element name="treeNodePriority" type="xsd:string" minOccurs="0"
maxOccurs="1" />
      <xsd:element name="treeNode" type="xsd:string" minOccurs="0" maxOccurs="1" />
   </xsd:sequence>
</xsd:complexType>
```

Method Output

```
<xsd:element name="purgeCacheResult">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="jobInfo" type="sawsoap:JobInfo" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>
```

Valid Usage Scenarios

All cache content is purged from cache.

```
<purgeCache>
</purgeCache>
```

Purges entries for the segment from cache.

```
<purgeCache>
   <segmentPath>[path to the segment]</segmentPath>
</purgeCache>
```

Purges entries for the segment tree from the cache.

```
<purgeCache>
   <treePath>[path to the segment tree]</treePath>
</purgeCache>
```

Usage Options

None.

saveResultSet Method

This method saves the list of resulting members that qualify for the segment based on the most recent updated counts.

API Definition

```
<xsd:element name="saveResultSet">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="segmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="treeNodePath" type="sawsoap:TreeNodePath" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="savedSegmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="segmentationOptions"
type="sawsoap:SegmentationOptions" minOccurs="0" maxOccurs="1" />
         <xsd:element name="SRCustomLabel" type="xsd:string" minOccurs="0"
```

```
maxOccurs="1" />
         <xsd:element name="appendStaticSegment" type="xsd:boolean" default="false"
minOccurs="0" maxOccurs="1" />
         <xsd:element name="sessionID" type="xsd:string" minOccurs="0"
maxOccurs="1" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>

<xsd:complexType name="TreeNodePath">
   <xsd:sequence>
      <xsd:element name="treePath" type="xsd:string" minOccurs="1" maxOccurs="1" />
      <xsd:element name="treeNode" type="xsd:string" minOccurs="0" maxOccurs="1" />
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="SegmentationOptions">
   <xsd:sequence>
      <xsd:element name="removeCacheHits" type="xsd:boolean" default="false"
minOccurs="0" maxOccurs="1" />
      <xsd:element name="countOverride" type="sawsoap:OverrideType"
default="Default" minOccurs="0" maxOccurs="1" />
      <xsd:element name="cacheOverride" type="sawsoap:OverrideType"
default="Default" minOccurs="0" maxOccurs="1" />
      <xsd:element name="samplingFactor" type="xsd:decimal" default="100"
minOccurs="0" maxOccurs="1" />
      <xsd:element name="prompts" type="xsd:namevaluepair" minOccurs="0"
maxOccurs="unbounded" />
      <xsd:element name="govRules" type="xsd:namevaluepair" minOccurs="0"
maxOccurs="unbounded" />
   </xsd:sequence>
</xsd:complexType>
```

Valid Usage Scenarios

Saves the list of resulting members that qualify for the segment based on the most recent updated counts.

```
<saveResultSet>
   <segmentPath>[path to the segment]</segmentPath>/
</saveResultSet>
```

Saves the list of resulting members that qualify for the segment tree branch based on the most recent updated counts. The list of resulting members are extracted and saved to the specified savedSegmentPath.

```
<saveResultSet>
   <treeNodePath>
      <treePath>[path to the segment tree]</treePath>
      <treeNode>[branch ID number for a branch in the segment tree]</treeNode>
   </treeNodePath>
   <savedSegmentPath>[new segment name where resulting members are extracted and
saved to]</savedSegmentPath>
</saveResultSet>
```

When defining a Saved Result Set File formats, map the “Alias” text box (found in the column formula [fx icon] pop-up) to a physical table column name. For example, guid might map to GUID, or ROW_ID might map to TARGET_LEVEL_ID in M_SR_Account.

Usage Options

Because saveResultSet performs a getCounts on a segment or segment tree prior to saving the result set, segmentationOptions can be specified to customize the getCounts. Refer to the Usage Options of getCounts for segmentationOptions details.

writeListFiles Method

The writeListFiles method generates lists for list export, segment campaign load, or segment tree campaign load.

API Definition

```
<xsd:element name="writeListFiles">
   <xsd:complexType>
      <xsd:sequence>
         <xsd:element name="report" type="sawsoap:ReportRef" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="reportParams" type="sawsoap:ReportParams" minOccurs="0"
/>
         <xsd:element name="segmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="treeNodePath" type="sawsoap:TreeNodePath" minOccurs="0"
maxOccurs="1" />
         <xsd:element name="segmentationOptions"
type="sawsoap:SegmentationOptions" minOccurs="0" maxOccurs="1" />
         <xsd:element name="filesystem" type="xsd:string" />
         <xsd:element name="timeout" type="xsd:integer" />
         <xsd:element name="sessionID" type="xsd:string" />
      </xsd:sequence>
   </xsd:complexType>
</xsd:element>

<xsd:complexType name="ReportRef">
   <xsd:sequence>
      <xsd:element name="reportPath" type="xsd:string" nillable="true" />
      <xsd:element name="reportXml" type="xsd:string" nillable="true" />
      <xsd:element name="reportDef" type="sawsoap:ReportDef" nillable="true" />
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="ReportDef">
   <xsd:complexContent mixed="false">
      <xsd:restriction base="xsd:anyType">
         <xsd:sequence />
```

```
      </xsd:restriction>
   </xsd:complexContent>
</xsd:complexType>

<xsd:complexType name="TreeNodePath">
   <xsd:sequence>
      <xsd:element name="treePath" type="xsd:string" />
      <xsd:element name="treeNode" type="xsd:string" />
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="SegmentationOptions">
   <xsd:sequence>
      <xsd:element name="removeCacheHits" type="xsd:boolean" default="false"
minOccurs="0" maxOccurs="1" />
      <xsd:element name="countOverride" type="sawsoap:OverrideType"
default="Default" minOccurs="0" maxOccurs="1" />
      <xsd:element name="cacheOverride" type="sawsoap:OverrideType"
default="Default" minOccurs="0" maxOccurs="1" />
      <xsd:element name="samplingFactor" type="xsd:decimal" default="100"
minOccurs="0" maxOccurs="1" />
      <xsd:element name="prompts" type="xsd:namevaluepair" minOccurs="0"
maxOccurs="unbounded" />
      <xsd:element name="govRules" type="xsd:namevaluepair" minOccurs="0"
maxOccurs="unbounded" />
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="ReportParams">
   <xsd:sequence>
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="filterExpressions" />
<!--ref="sawexpr:expr"-->
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="variables"
type="sawsoap:Variable" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="nameValues"
type="sawsoap:NameValuePair" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="templateInfos"
type="sawsoap:TemplateInfo" />
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="Variable">
   <xsd:sequence>
      <xsd:element name="name" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="valueXml" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="value" /> <!--
ref="sawexpr:expr"-->
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="NameValuePair">
   <xsd:sequence>
      <xsd:element name="name" type="xsd:string" />
```

```
      <xsd:element name="value" type="xsd:string" />
   </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="TemplateInfo">
   <xsd:sequence>
      <xsd:element name="templateForEach" type="xsd:string" />
      <xsd:element name="templateIterator" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="instance">
         <xsd:complexType>
            <xsd:sequence>
               <xsd:element name="instanceName" type="xsd:string" />
               <xsd:element minOccurs="0" maxOccurs="unbounded" name="nameValues"
type="sawsoap:NameValuePair" />
            </xsd:sequence>
         </xsd:complexType>
      </xsd:element>
   </xsd:sequence>
</xsd:complexType>
```

Valid Usage Scenarios

Generates lists for list export. One or more instance elements are specified.

```
<writeListFiles>
   <report>
      <reportPath>[path to list format]</reportPath>
   </report>

   <reportParams>
      <nameValues>
         <name>[0_name]</name>
         <value>[0_value]<value>
      </nameValues>
      <nameValues>
         <name>[1_name]</name>
         <value>[1_value]<value>
      </nameValues>
      …
      <nameValues>
         <name>[N_name]</name>
         <value>[N_value]<value>
      </nameValues>

      <templateInfos>
         <templateForEach>segments</templateForEach>
         <templateIterator>segment</templateIterator>
         <instance>
            <instanceName>[first name=value pair name in the instance xml element]</
instanceName>
            <nameValues>
               <name>[A0_name]</name>
               <value>[A0_value]<value>
            </nameValues>
```

```
            <nameValues>
               <name>[A1_name]</name>
               <value>[A1_value]<value>
            </nameValues>
            …
            <nameValues>
               <name>[AN_name]</name>
               <value>[AN_value]<value>
            </nameValues>
         </instance>
         <instance>
            <instanceName>[first name=value pair name in the instance xml element]</
instanceName>
            <nameValues>
               <name>[B0_name]</name>
               <value>[B0_value]<value>
            </nameValues>
            <nameValues>
               <name>[B1_name]</name>
               <value>[B1_value]<value>
            </nameValues>
            …
            <nameValues>
               <name>[BN_name]</name>
               <value>[BN_value]<value>
            </nameValues>
         </instance>
         …
         <instance>
            <instanceName>[first name=value pair name in the instance xml element]</
instanceName>
            <nameValues>
               <name>[N0_name]</name>
               <value>[N0_value]<value>
            </nameValues>
            <nameValues>
               <name>[N1_name]</name>
               <value>[N1_value]<value>
            </nameValues>
            …
            <nameValues>
               <name>[NN_name]</name>
               <value>[NN_value]<value>
            </nameValues>
         </instance>
      </templateInfos>
   </reportParams>
   <filesystem>[path to shared directory containing list files]</filesystem>
   <timeout>[timeout value]</timeout>
</writeListFiles>
```

Generates list for segment campaign load. Only one instance element is specified.

```
<writeListFiles>
   <report>
      <reportPath>[path to list format]</reportPath>
   </report>

   <reportParams>
      <nameValues>
         <name>[0_name]</name>
         <value>[0_value]<value>
      </nameValues>
      <nameValues>
         <name>[1_name]</name>
         <value>[1_value]<value>
      </nameValues>
      …
      <nameValues>
         <name>[N_name]</name>
         <value>[N_value]<value>
      </nameValues>
      <templateInfos>
         <templateForEach>segments</templateForEach>
         <templateIterator>segment</templateIterator>
         <instance>
            <instanceName>[first name=value pair name in the instance xml element]</
instanceName>
            <nameValues>
               <name>[A0_name]</name>
               <value>[A0_value]<value>
            </nameValues>
            <nameValues>
               <name>[A1_name]</name>
               <value>[A1_value]<value>
            </nameValues>
            …
            <nameValues>
               <name>[AN_name]</name>
               <value>[AN_value]<value>
            </nameValues>
         </instance>
      </templateInfos>
   </reportParams>
   <segmentationOptions>
      <prompts>
         <name>[P0_name]</name>
         <value>[P0_value]</value>
      </prompts>
      <prompts>
         <name>[P1_name]</name>
         <value>[P1_value]</value>
      </prompts>
  …
      <prompts>
         <name>[PN_name]</name>
         <value>[PN_value]</value>
```

```
        </prompts>
        <govRules>
           <name>[GR0_name]</name>
           <value>[GR0_value]</value>
        </govRules>
        <govRules>
           <name>[GR1_name]</name>
           <value>[GR1_value]</value>
        </govRules>
     …
        <govRules>
           <name>[GRN_name]</name>
           <value>[GRN_value]</value>
        </govRules>
     </segmentationOptions>
     <filesystem>[path to shared directory containing list files]</filesystem>
     <timeout>[timeout value]</timeout>
  </writeListFiles>
```

Generates list for segment tree campaign load. Only one instance element is specified.

```
  <writeListFiles>
     <report>
        <reportPath>[path to list format]</reportPath>
     </report>

     <reportParams>
        <nameValues>
           <name>[0_name]</name>
           <value>[0_value]<value>
        </nameValues>
        <nameValues>
           <name>[1_name]</name>
           <value>[1_value]<value>
        </nameValues>
        …
        <nameValues>
           <name>[N_name]</name>
           <value>[N_value]<value>
        </nameValues>
        <templateInfos>
           <templateForEach>segments</templateForEach>
           <templateIterator>segment</templateIterator>
           <instance>
              <instanceName>[first name=value pair name in the instance xml element]</
  instanceName>
              <nameValues>
                 <name>[A0_name]</name>
                 <value>[A0_value]<value>
              </nameValues>
              <nameValues>
                 <name>[A1_name]</name>
                 <value>[A1_value]<value>
              </nameValues>
```

```
            …
            <nameValues>
               <name>[AN_name]</name>
               <value>[AN_value]<value>
            </nameValues>
         </instance>
      </templateInfos>
   </reportParams>
   <segmentationOptions>
      <prompts>
         <name>[P0_name]</name>
         <value>[P0_value]</value>
      </prompts>
      <prompts>
         <name>[P1_name]</name>
         <value>[P1_value]</value>
      </prompts>
…
      <prompts>
         <name>[PN_name]</name>
         <value>[PN_value]</value>
      </prompts>
      <govRules>
         <name>[GR0_name]</name>
         <value>[GR0_value]</value>
      </govRules>
      <govRules>
         <name>[GR1_name]</name>
         <value>[GR1_value]</value>
      </govRules>
…
      <govRules>
         <name>[GRN_name]</name>
         <value>[GRN_value]</value>
      </govRules>
   </segmentationOptions>
   <filesystem>[path to shared directory containing list files]</filesystem>
   <timeout>[timeout value]</timeout>
</writeListFiles>
```

getPromptedColumns Method

The getPromptedColumns operation returns prompted columns for a segment or a segment tree. Either the segmentPath or the treePath element must be specified as an input parameter or else an error is returned.

API Definition

```
<xsd:element name="getPromptedColumns">

      <xsd:complexType>
```

```
         <xsd:sequence>

            <xsd:element name="segmentPath" type="xsd:string" minOccurs="0"
maxOccurs="1" />

         <xsd:element name="treePath" type="xsd:string" minOccurs="0" maxOccurs="1"
/>

            <xsd:element name="sessionID" type="xsd:string" minOccurs="0"
maxOccurs="1" />

         </xsd:sequence>

      </xsd:complexType>

   </xsd:element>
```

Valid Usage Scenarios

The following are valid usage scenarios for the getPromptedColumns method:

- Returns the prompted columns for the segment.

```
<getPromptedColumns>

      <segmentPath>[path to the segment]</segmentPath>

      <sessionID>[session ID]</sessionID>

</getPromptedColumns>
```

- Returns the prompted columns for the segment tree.

```
<getPromptedColumns>

<treePath>[path to the segment tree]</treePath>

           <sessionID>[session ID]</sessionID>

</getPromptedColumns>
```

3 Designing Marketing List Formats

This chapter describes how to design marketing list formats. It includes the following topics:

- Acceptable Characters in Marketing Configuration Entries on page 39
- About Designing Marketing List Formats on page 39
- Designing Marketing List Formats on page 40
- List Format Column Properties and Formatting Options on page 59
- List Format Column Properties and Formatting Options on page 59

Acceptable Characters in Marketing Configuration Entries

When entering values in fields in the Marketing Administration screens, do not use apostrophes (‘). These result in multiple failures of the Marketing Server component during attribute synchronization, campaign generation, and other tasks. This failure is due to SQL relying on apostrophes as a delimiter. The presence of apostrophes in the data columns, such as attribute names, table names, field names, and hierarchy names causes an SQL error.

About Designing Marketing List Formats

List Formats define the layout of files that you can use for a variety of purposes. Use the List Format Designer to select content from a subject area (list catalog), using filters that you add to the list format definition.

The List Format Designer can generate list formats for several purposes. These formats are listed in the left selection pane:

- **List Export Formats.** Typically used for campaign distribution lists, such as direct mail, exports to external vendors, exports to other IT applications, and other channels. Typically, list formats contain the name, customer profile, address, email address, and other information for the members of a segment or segment tree cell.
- **Email Server Formats.** Used to export the relevant data for each member of an email campaign to the Oracle E-Mail Marketing Server.
- **Campaign Load Formats.** Used to load the members of a segment or a segment tree cell into the campaign history table in the transactional database through EAI.
- **Data Load Formats.** Used to import any type of data into the transactional database through EAI.
- **Saved Result Set Formats.** Used to save result sets from segments and segment trees.

In the list formats page you can either open an existing, saved list format or create a new list format. To create a new list format, select a subject area from the popup list. You specify the type of list later on using a control in the Options tab.

Existing list formats are in the List Format pane to the left. The formats are in folders, and the formats are organized first by format (List Export, Email Server, Campaign Load, and so on) and then by personal and shared formats. Examples: My List Export Formats, Shared List Export Formats.

You can combine data from more than one subject area by using the set operation capability in the List Format designer. You can combine data from more than one data source into a single file. For example, you can combine the list of segment members from your data with some additional customers that may only exist in your transactional database. To obtain descriptions for commonly used terms, see "Frequently Used Terms for Marketing List Formats" on page 40.

The List Format Designer supports a variety of options to format the content including column sorting and casing for each column. For a list of formatting options, see "Column Properties Formatting Options" on page 61.

Navigating to the List Format Designer

Access to the List Format Designer start page depends on your product license key and privileges. From Oracle BIEE application, navigate to New - List Format.

Frequently Used Terms for Marketing List Formats

Table 3 defines frequently used terms for list formats.

Table 3. Frequently Used Terms for Marketing List Formats

Term	Description
Column set	A set of columns from a subject area.
Data set	The result of applying filters to a column set selected from a list catalog.
Filter (list formats)	A criteria added to the list format to constrain the data included in the list file.
List catalog	A subject area that is enabled for list export.

Designing Marketing List Formats

The List Format Designer can generate lists in different formats for the following purposes.

- **List Export Formats.** For more information, see Defining List Export Formats on page 41.
- **Email Server Formats.** For more information, see Defining Email Server Formats on page 44.
- **Campaign Load Formats.** For more information, see Defining Campaign Load Formats on page 46.

- **Data Load Formats.** For more information, see Defining Data Load or Customer Synchronization Formats on page 49.
- **Saved Result Set Formats.** For more information, see Defining Saved Result Set Formats on page 51.

The following topics are not specific to any one list format. They provide additional information to enhance your understanding of the capabilities of list formats:

- Adding Columns to List Formats on page 51
- Combining Lists From Different Subject Areas on page 53
- Adding Calculated Fields and System Fields to a List Format on page 53
- Adding a System Data Expression as a Column in a List Format on page 53

Defining List Export Formats

A List Export format defines the customer data and other campaign-related information that is exported so that the campaign can be executed. For example, a list export format may provide a list file for the following purposes:

- Sending a list of customers and addresses to a direct mail vendor for printing and mailing.
- Distributing a call list to employees in a sales organization.
- Exporting the campaign list to another IT application.

In addition to using list export formats in campaigns, you can define them for a variety of uses. The only requirement is that the data be accessible by the BI Server.

If you are using the standard metadata from the Oracle BI Administration Tool for the data warehouse, the application provides examples of List Export formats in the following location in the Web Catalog:

Shared List Export Formats/Marketing/Example List Formats

To create a list export format and add columns

1. From Oracle BIEE application, navigate to New - List Format.
2. From the list of Subject Areas in the popup, select a subject area that includes the columns for your export file.

   NOTE: Be sure to determine whether to get data from the transactional database, the data warehouse, or another data source, and then select the corresponding Subject Area.
3. Expand the folders in the left selection panel and click each column name to add it to the format.
4. To modify the displayed name for a column, in the Column Properties dialog box, use the Custom Headings option.
5. Click the properties button on a column to apply custom formatting.

   For information about column formatting options, see “List Format Column Properties and Formatting Options” on page 59.

6 Add any filters to be applied to the list format contents every time a list is generated.

NOTE: If the campaign membership already constrains the expected set of output records, this step is not required.

7 If you plan to use this export format for campaign execution, add filters to constrain the output to a specific campaign wave or set of waves using system data expressions.

8 Click the save icon in the upper-right corner of the screen and follow the instructions in the dialog box.

To add filters to constrain output to the correct campaign waves

1 From the selection panel, add the column that corresponds to the Campaign Wave Id.

2 Select the formula button to add a filter based on the column.

3 In the Edit Filter dialog box, click Add and select System Data.

4 In the System Data list, select the Wave Id expression.

5 Click OK to add the filter.

6 Click the delete button to remove the column from the output columns (unless you want to include the Wave Id as an included column).

For information about adding system data expressions, see "Adding a System Data Expression as a Column in a List Format" on page 53.

7 Click the save icon in the upper-right corner of the screen and follow the instructions in the dialog box.

To set options, headers, and footers for list export formats

1 Click the Options tab and select the following options based on the results you want to achieve:

Attribute	Option
Purpose	List Export

(choose format)	**Output Type**:
	■ Delimited File
	■ Fixed Width
	■ XML (not valid for Database repository choice)
	  ■ Record Set element. Enter the XML tag name for the outer record set.
	  ■ Record element. Enter the XML tag name for each record.
	Repository Choice:
	■ File system
	■ Content Server Repository
	  ■ Content Check-in Type
	  ■ Title
	  ■ Security
	  ■ Account
	■ Database
	  ■ Generate WriteBack Count. Select this check box to get the number of records inserted into the physical table.
	  ■ Include duplicate records. Select this check box to include duplicate records into the physical table.
	  ■ Connection Pool. Enter the connection pool name for access to the physical table.

End of Field Delimiter	(any)
Text Qualifier	optional
File Name	The default name includes components for format name, job ID, time stamp, and file counter. You can edit the default name by removing any of these components, and adding in constants (such as your company name). To add more components, click Available System Data.

Attribute	Option
Maximum Record Count	Optional. You can limit the quantity of records in your output. This is useful for creating a test list and for when you have to limit the number of contacts in the list.
Include column headers	Optional
Order by all Non-measure columns left to right when no column is ordered explicitly	Check this to order (sort) the list as indicated in the prompt.

2. To set up a custom header or footer, click the Header and Footer tab.
3. To include text, click in the Header Content or Footer Content workspace.
4. If required, add any System Data expressions to the header or footer content.

   For more information, see "Adding Marketing List Format Headers and Footers" on page 62. For a list of system data expressions, see "Adding a System Data Expression as a Column in a List Format" on page 53.
5. Test your list format by previewing some sample contents of the list format.

   To preview a list format, see "Previewing a Marketing List Format" on page 62.
6. To combine data from multiple subject areas, click Combine with list from another Subject Area.

   For more information, see "Combining Lists From Different Subject Areas" on page 53.

   NOTE: You must apply column formatting to the combined results.
7. Click the save icon in the upper-right corner of the screen and follow the instructions in the dialog box.

Defining Email Server Formats

An Email Server format is used to export the members of an email campaign to the Oracle E-Mail Marketing Server. The Email Personalization Format provides the columns that can be used as merge fields to personalize the email message sent to each recipient. You can find examples of email personalization formats in the following location:

Shared Email Server Formats/Marketing/Example List Formats

To define an email server format

1. From Oracle BIEE application, navigate to New - List Format.
2. From the list of Subject Areas in the popup, select a subject area that includes the columns for your email server file.

   In most situations, the Subject Area corresponds to data pulled directly from the campaign history in the transactional database.
3. Expand the folders in the left selection panel and click each column name to add it to the format.

4 Add the columns from the Subject Area to be available as merge fields in the email template.

5 Add the required columns.

The following columns are required for all email server formats:

- First Name
- Last Name
- Email Address
- Camp Con Id
- Contact Id
- Prospect Id
- Batch Number

NOTE: When you add the Batch Number column, you must include the column in the sort order and assign a split value. For more information, see "Adding Columns to List Formats" on page 51.

6 Make sure that the displayed name of the column exactly matches the values in the list in Step 3 on page 44.

- If a Subject Area column that you select from the required columns list does not have a column label that exactly matches the name in the list, in the Column Properties dialog box, use Custom Headings option to modify the heading.
- You can add additional columns as needed. If you must modify the displayed name for a column, in the Column Properties dialog box, use Custom Headings option.

7 Remove the table heading portion of the column header caption for all columns.

The Email Marketing Server expects each column header in the email file to contain the column header, not the table header caption. For each column in the format, use the following steps to remove the table heading portion of the column header caption:

a Select Column Properties on the column.

b In the Column Properties dialog, select the Custom Headings check box.

c Delete the value in the Table Heading field.

d Click OK.

8 To apply any custom formatting for a column, click the properties button on the column.

For information about column formatting options, see "List Format Column Properties and Formatting Options" on page 59.

9 Add a filter to constrain the output based on the runtime Campaign Wave by adding the system data expression (Wave Id) to the column formula in the following steps:

a Add the Wave Id column to the format.

b Click the filter button and add the Wave ID System Data Expression in the filter.

For more information about adding system data expression to a list format, see "Adding a System Data Expression as a Column in a List Format" on page 53.

c Click the delete button to delete the Wave ID from the displayed columns.

10 If your email content needs to be filtered based on a secondary Qualified List Item, select the following check box in the Filter section of the Columns view:

Re-qualify list results against original segment criteria

11 If necessary, click the Options tab and specify the following options:

Attribute	Option
Purpose	Email Personalization
(choose format)	Delimited File
End of Field Delimiter	Comma
Text Qualifier	""
File Name	The default name includes components for format name, job ID, time stamp, and file counter. You can edit the default name by removing any of these components, and adding in constants (such as your company name). To add more components, click "Available System Data".
Maximum Record Count	Optional. You can limit the quantity of records in your output. This is useful for creating a test list and for when you have to limit the number of contacts in the list.
Include Column Headers	optional
Order by all Non-measure columns left to right when no column is ordered explicitly	Check this to order (sort) the list as indicated in the prompt.

12 Test your list format by previewing some sample contents of the list format. To preview a list format, see "Previewing a Marketing List Format" on page 62.

13 To combine data from multiple subject areas, click Combine with list from another Subject Area.

For more information, see "Combining Lists From Different Subject Areas" on page 53.

NOTE: You must apply column formatting to the combined results.

14 Click the save icon in the upper-right corner of the screen.

Defining Campaign Load Formats

Campaign Load formats are used to load the members of a segment or a segment tree cell into the campaign history table in the transactional database through EAI.

To create a campaign load format and add columns

1. From Oracle BIEE application, navigate to New - List Format.
2. From the list of Subject Areas in the popup, select a subject area that includes the columns for your campaign load file.

   NOTE: Be sure to determine whether to get data from the transactional database, the data warehouse, or another data source, and then select the corresponding Subject Area.
3. Expand the folders in the left selection panel and click each column name to add it to the format.
4. To modify the displayed name for a column, in the Column Properties dialog box, use the Custom Headings option.
5. Click the properties button on a column to apply custom formatting.

   For information about column formatting options, see "List Format Column Properties and Formatting Options" on page 59.
6. Add any filters to be applied to the list format contents every time a list is generated.

   NOTE: If the campaign membership already constrains the expected set of output records, this step is not required. If the customer records are already loaded into the campaign history and you are exporting these customers, it is not necessary to requalify the segment criteria.
7. If you plan to use this export format for campaign execution, add filters to constrain the output to a specific campaign wave or set of waves using system data expressions.
8. Click the save icon in the upper-right corner of the screen and follow the instructions in the dialog box.

To create a list format that writes to a table

1. Click the Options tab and select the following options:

Attribute	Option
Purpose	Campaign Load
(choose format)	Database Database options: ■ Physical Table. Enter the name of the physical table in the connection pool in which to store the records. ■ Connection Pool. Enter the name of the Oracle BI connection pool from the RPD layer.

2. Click the Columns tab and click the Edit Formula button.
3. In the Edit Column Formula dialog box, click the Column Formula tab.
4. Complete the fields in the dialog box to map the desired columns. In the Alias field, enter the physical column name of the table specified in Step 1.

NOTE: Be sure to map the primary key to one column.

To set options, headers, and footers for formats

1 Click the Options tab and select the following options based on the results you want to achieve:

Attribute	Option
Purpose	Campaign Load
(choose format)	Delimited File, Fixed Width, XML, or Database
End of Field Delimiter	(any)
Text Qualifier	optional
File Name	The default name includes components for format name, job ID, time stamp, and file counter. You can edit the default name by removing any of these components, and adding in constants (such as your company name). To add more components, click “Available System Data”.
Maximum Record Count	Optional. You can limit the quantity of records in your output. This is useful for creating a test list and for when you have to limit the number of contacts in the list.
Include Column Headers	optional
Order by all Non-measure columns left to right when no column is ordered explicitly	Check this to order (sort) the list as indicated in the prompt.

2 To set up a custom header or footer, click the Header and Footer tab.

3 To include text, click in the Header Content or Footer Content workspace.

4 If required, add any System Data expressions to the header or footer content.

For more information, see “Adding Marketing List Format Headers and Footers” on page 62. For a list of system data expressions, see “Adding a System Data Expression as a Column in a List Format” on page 53.

5 Test your format by previewing some sample contents of the format.

To preview a format, see “Previewing a Marketing List Format” on page 62.

6 To combine data from multiple subject areas, click Combine with list from another Subject Area.

For more information, see “Combining Lists From Different Subject Areas” on page 53.

NOTE: You must apply column formatting to the combined results.

7 Click the save icon in the upper-right corner of the screen and follow the instructions in the dialog box.

Defining Data Load or Customer Synchronization Formats

The Data Load format is used to import any type of data into the transactional database. The customer synchronization format is used to import a batch of new customers into the transactional database or to update a set of customer profiles. You can find examples of data load formats in the following location:

Shared Data Load Formats/Marketing/Example List Formats

Column Headings Must Match Field Names in Integration Components

If you use one of the standard subject areas provided for data load, the column names are already set to match the field names in the Integration Components in the enterprise application. To load data that does not exist in these subject areas, you must use other subject areas.

CAUTION: Data Load and Customer Synchronization formats must have columns that exactly match the field names of the integration components where the data is loaded.

If necessary, use Custom Headings in the Column Properties dialog box to rename any columns whose label does not exactly match the name of the integration component field name in the enterprise application.

For customer data (Contacts, Accounts, and Prospects), the standard application provides example subject areas that are already set up for BI Data Load. The standard application provides the following three subject areas that can be used for this purpose:

- Campaign Load - Contacts
- Campaign Load - Accounts
- Campaign Load - Prospects

Preconfigured Integration Objects Used in Headers and Footers

The standard application provides the following preconfigured integration objects that you can use in headers and footers:

- BI Account
- BI Contact
- BI Household

In the standard repository (SRF file), only certain fields from the extension tables in the business objects for Contacts, Accounts, and Households are enabled for update by default using the BI Data Load process. For example, in the Contacts business component, only the extension columns Attribute 49 through Attribute 64 are set up for this purpose. If you must update additional extension columns, confirm that the business component fields are enabled for update through the corresponding Integration Component.

To define data load or customer synchronization formats

1. From Oracle BIEE application, navigate to New - List Format.
2. From the list of Subject Areas in the popup, select a subject area that includes columns to load into the enterprise application.
3. Expand the folders in the selection panel and click each column name to add it to the format.
4. Verify that you have included the required columns for the business component to load. For more information about business components, see *Configuring Siebel Business Applications*.
5. If necessary, in the Column Properties dialog box, use Custom Headings option to rename any columns whose label does not exactly match the name of the integration component field name in the enterprise application. For more information, see "Column Headings Must Match Field Names in Integration Components" on page 49.

   CAUTION: Data Load and Customer Synchronization formats must have columns that exactly match the field names of the integration components where the data is loaded.
6. Apply filters to constrain the data to be loaded.

   For example, to load contacts that have been added to the data warehouse since 01/01/2004, you could add a filter similar to the following:

   Contact Created Date is greater than 01/01/2004 12:00:00 AM
7. Click the Options tab and select the following options:

Attribute	Option
Purpose	BI Data Load or Customer Synchronization
(choose format)	Delimited File
End of Field Delimiter	Comma
Text Qualifier	""
Maximum Record Count	1000

8. Click the Headers and Footers tab.

9 In the Headers and Footers field, enter the integration object name to load using the following format. See the following example:

Format	Example
# *integration object name*	# BI Contact
#	#

CAUTION: You must not add additional text or a system data expression to the header. Additionally, do not press enter at the end of the second line. For EAI formatting, there must not be an end-of-line character at the end of the header.

For more information, see "Preconfigured Integration Objects Used in Headers and Footers" on page 49.

10 Test your list format by previewing some sample contents of the list format. To preview a list format, see "Previewing a Marketing List Format" on page 62.

11 To combine data from multiple subject areas, see "Combining Lists From Different Subject Areas" on page 53.

12 Click the save icon in the upper-right corner of the screen.

Defining Saved Result Set Formats

Saved Result Set formats are used to save result sets from segments and segment trees.

To create a saved result set format and add columns

1 From Oracle BIEE application, navigate to New - List Format.

2 From the list of Subject Areas in the popup, select a subject area that includes the columns for your export file.

NOTE: Be sure to determine whether to get data from the transactional database, the data warehouse, or another data source, and then select the corresponding Subject Area.

3 Expand the folders in the left selection panel and click each column name to add it to the format.

4 Click the properties button on a column to apply custom formatting.

5 Add any filters to be applied to the list format contents every time a list is generated.

6 Click the save icon in the upper-right corner of the screen and follow the instructions in the dialog box.

Adding Columns to List Formats

You select the columns in a subject area to include in a list format. The subject area for the request is listed in the selection pane with the tables and columns it contains.

After you have added a column, you can use the buttons on the column to modify the column formatting, add a formula, add a filter, or sort or split the contents.

CAUTION: If you click the refresh button in the browser window before you finish creating a request, be aware that the browser reloads all frames and deletes your changes.

To add a column to the list format

1. From Oracle BIEE application, navigate to New - List Format.
2. Create a new list format or open an existing format.
3. Click columns in the selection pane to add them to the list format definition.
4. Use the column buttons shown in Table 4 to control the use of each column in the request.

Table 4. List Format Button Descriptions

Button	Description
	The order by button adds a column to the sort order and specifies the order in which results are returned, ascending or descending. The button appears as gray (unavailable), up and down arrows if the column has not been added to the sort order. When a column is part of the sort order, the button changes to an up or a down arrow. You can order results by more than one column. If you choose more than one column, the order sequence number appears on the order by button. To remove or change the sort order from a column, click the order by button until the sorting is changed or removed.
	Click the properties button to edit various format properties for the column. For more information, see "List Format Column Properties and Formatting Options" on page 59.
	The edit formula button lets you change the column heading, create a formula for the column (such as adding a Rank or Percentile function), or add a system data expression. For more information, see "Adding Calculated Fields and System Fields to a List Format" on page 53.
	The add filter button lets you create or edit a filter for the column. For information about adding filters to a criteria block, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition.*
	The split button splits the contents of the file by unique values in that column. The split button is not available unless the column is part of the sort order. When the split is active, a separate file generates for each distinct value for that column in the results.
	The delete button deletes the column from the request.
	The action button opens a menu of available options.

To sort a list or split a list into multiple files

1. From Oracle BIEE application, navigate to New - List Format.

2 Locate the column or columns by which to sort or split.

3 Use the column buttons described in Table 4 on page 52 to activate sorting or splitting.

Combining Lists From Different Subject Areas

You can use a List Format to combine two or more lists from different Subject Areas. For example, you can combine a set of customers from your data warehouse with a set of customers from your transactional database.

To combine data sets from multiple subject areas, you select a similar column set from each subject area. After you have combined two or more column sets, you can use standard set operators (Intersect, Union, Union All, and Minus) to determine the final result set.

Each column set from each subject area must have the same number of columns and the data types for corresponding columns must match.

To combine data sets across subject areas

1 From Oracle BIEE application, navigate to New - List Format.

2 Select a column set from your first subject area.

3 Add filters to control the contents of the first data set.

4 Click Combine with list from another Subject Area.

5 Select the Subject Area for your second column set.

6 After you have added the columns for each column set, click the Combined Results link.

7 Click the buttons on the columns in the Combined Results to control the formatting, sorting, and splitting of the combined list.

Adding Calculated Fields and System Fields to a List Format

Use the column formula dialog box to add a calculated column or a column based on a system data expression to the list format. Calculated fields can be created using a wide variety of formulas based on other columns in subject area.

System Data are variables that can be added to a list format at run time. For example, if you are exporting a campaign file, you may want to include a column displaying the segment for each customer in the list. To do this, you add System Data for the Segment Name to the list format, and the server determines the correct segment for the file based on the campaign being executed. System Data can also be used for filtering the contents of the file based on the context of a campaign or other use.

Adding a System Data Expression as a Column in a List Format

To automatically populate campaign contact columns with values that are determined by the list generation process at run time, you must set up the Campaign Contact columns to use system data expressions.

If you use list export format for campaign execution, you can add columns to constrain the output using system data expressions. To add a filter to constrain the output based on the run-time campaign wave, add the system data expression wave ID.

To add a system data expression

1. From Oracle BIEE application, navigate to New - List Format.
2. In the List Format Designer, select a column from the selection pane.
3. Click the fx button.
4. In the Edit Column Formula dialog box, select the Custom Headings check box.
5. Delete the text from the Column Formula workspace.
6. Click the Available System Data link.
7. In the System Data list, select a system data expression.

   For example, if you choose the Campaign Id expression, the following appears

   ```
   @{campaignID}{0}
   ```

   NOTE: The value in the braces at the end of the expression is the default value for the expression. If you do not provide an input value for the list generation request, the default value is used.
8. To display the System Data Expression column in the file, leave the column in the column set at the top of the page.
9. To filter the content but not display the column, perform the appropriate steps from the following list:
   - Add the column.
   - Apply the data expression to the Column Formula.
   - Delete the column from the column set by clicking the delete button on the column.

Configuring the System for New System Data Expressions

You may need to add System Data Expressions in addition to data expressions that are automatically installed. For example, you might have customizations that require that additional information be passed to the list generation job by the Web Service. Or, if you are upgrading from a previous version of Siebel Marketing, new columns such as Treatment Id might not be included in your repository and configuration files. You must modify two configuration files to add system data expressions.

To add new System Data Expressions

1. Open the marketingwebexpressions.xml file:

   ```
   <OBIEE_INSTALL_DIR>\instances\instance1\config\OracleBIPresentationServicesCompone
   nt\coreapplication_obips1\marketingwebexpressions.xml
   ```

2 Scroll to the bottom of the file and add your new expression.

For example, if you want to add treatmentID, enter a new section:

```
<WebExpression name="treatmentID" usequotes="true">
   <messageKey>kmsgMktgWebExprTreatmentId</messageKey>
   <default></default>
</WebExpression>
```

3 Test to make sure that the new expression appears in the User Interface.

a Save your changes to the marketingwebexpressions.xml file.

b Restart the BI Presentation Services.

c Navigate to Administration - Marketing > List Formats.

d Create a list format or open an existing format.

e Click on the button for a column, enter the cursor in the formula box, and then select the System Data link.

The new expression appears in the list.

f Click the new expression, and a formula is automatically populated.

The treatmentID expression, similar to the following example, appears:

```
'@{treatmentID}{}'
```

Using Extension Attributes as System Data Expressions

You can use extension attributes as system data expressions by adding them to the marketingwebexpressions.xml file. The following is an example:

```
<WebExpression name="segment.offer" usequotes="true">
   <messageKey>kmsgMktgWebExprOfferName</messageKey>
   <default></default>
   <context>extensionAttribute</context>
   <width>10</width>
</WebExpression>
```

When you are finished editing the marketingwebexpressions.xml file, restart the server.

System Data Expressions Used in List Format Elements

Each list format element (Column formula, Headers/Footers, and Filters) can contain one or more system data expressions. Table 5 shows which System Data Expressions can be used in each list format element.

Table 5. System Data Expressions Used in List Format Elements

System Data Expression	Column Formulas (Y=Supported)	Filters (Y=Supported)	Headers/Footers (Y=Supported)
Bytes per Record	-	-	Y
Campaign Id	Y	Y	Y
Campaign Name	-	-	Y
Campaign Source Code	Y	Y	Y
Current Date and Time	-	-	Y
Current User	-	-	Y
DNIS Number	Y	Y	Y
Email Batch Number	Y	Y	-
File Counter	-	-	Y
File Size in Bytes	-	-	Y
Load Number	Y	Y	Y
Offer Code	Y	Y	Y
Offer Name	Y	Y	Y
Qualifying Segment	Y	Y	-
Record Count	Y	-	Y
ROW_NUM_ID	Y	-	-
Segment Id	Y	Y	-
Segment Path	Y	Y	-
Segment Tree Node Label	Y	Y	-
Segment Tree Node Path	Y	Y	-
Segment Tree Path	Y	Y	-
Split Details	-	-	Y
Token Number	Y	Y	-
Treatment ID	Y	Y	Y
Wave Id	Y	Y	Y

List Format Types and Valid System Data Expressions

All system data expressions cannot be used with every list format. Table 6 on page 57 contains the list formats and shows which system data expressions can be used with each one.

Table 6. List Format Types and Valid System Data Expressions

List Format Type	Valid System Data Expressions
BI Data Load	No System Data Expressions
Campaign Load	Campaign Id Email Batch Number Load Number Segment Id Token Number Treatment ID
Customer Sync	No System Data Expressions

Table 6. List Format Types and Valid System Data Expressions

List Format Type	Valid System Data Expressions
Email Personalization	Bytes Per Record
	Campaign Id
	Campaign Name
	Campaign Source Code
	Current Data and Time
	Current User
	DNIS Number
	File Counter
	File Size in Bytes
	Offer Code
	Offer Name
	Record Count
	Segment Id
	Split Details
	Wave Id

Table 6. List Format Types and Valid System Data Expressions

List Format Type	Valid System Data Expressions
List Export	Bytes Per Record
	Campaign Id
	Campaign Name
	Campaign Source Code
	Current Data and Time
	Current User
	DNIS Number
	File Counter
	File Size in Bytes
	Offer Code
	Offer Name
	Record Count
	Segment Id
	Split Details
	Treatment ID
	Wave Id

List Format Column Properties and Formatting Options

You can edit properties for a list column to control the appearance and layout of a column and its contents. Table 7 on page 61 contains format options and descriptions.

This section contains the following topics:

- Editing the Layout of Column Contents on page 59
- Previewing a Marketing List Format on page 62
- Adding Marketing List Format Headers and Footers on page 62
- Options for Marketing List Formats on page 63

Editing the Layout of Column Contents

Use the Column Format tab of the Column Properties dialog box to perform the following tasks:

- **Specify whether or not the column must appear in results.** Columns are usually visible in results by default. However, you may want to include a column in your request that is not displayed in the results, such as a column used in creating a filter.
- **Assign alternate table and column headings and apply custom formatting to them.** You can also use functions and conditional expressions to format results in a variety of ways. Your selections apply only to the contents of the column for the request with which you are working.

To hide a column in report results

1. From Oracle BIEE application, navigate to New - List Format.
2. In the List Format designer, click the properties button for a column.

   Table 7 on page 61 contains format options and descriptions.
3. In the Column Properties dialog box, in the upper-right corner, select the Hide check box.
4. Click OK.

To create or change custom table and column headings

1. From Oracle BIEE application, navigate to New - List Format.
2. In the List Format designer, click the properties button for a column.

   Table 7 on page 61 contains format options and descriptions.
3. In the Column Properties dialog box, in the Headings area, click the Custom Headings check box and perform the following steps:
   a. To add a custom table heading and column heading name, enter new names in the Table Heading and Column Heading fields.

      The custom heading is used in this request instead of the default heading.
   b. To prevent a table name to appearing in the heading, use a blank name for the Table Heading field.
   c. To change the format of the table heading or column heading, In the Column Format area, click the edit format button next to the Table Heading or Column Heading field.
4. In the Column Format area, complete the appropriate fields using Table 7 on page 61 as a guide.
5. To control the way the data displays, in the Data Format area, select the Override Default Data Format check box and complete the appropriate fields.

6 Click OK.

Table 7. Column Properties Formatting Options

Format Option	Description
Alignment (for fixed width only)	Justifies the value in the column relative the right and left boundaries of the column. The options are Left Justify, Center Justify, and Right Justify.
Casing	Casing controls how capitalization is used in the selected column. The following are casing options with examples in parentheses: ■ Upper case (UPPER CASE) ■ Lower case (lower case) ■ Title case (Title Case) ■ Sentence case (Sentence case) ■ No casing (data is not modified from its original form)
Default Value	If you enter a default value in the Properties dialog box, if the selected column has an empty value for a row, the default value is inserted.
Headings	Headings display as the first row in the file when you select Include Column Headers in the List Format options page. By default, the heading is Presentation_Table_Name.Presentation_Column_Name. For a column, you can provide a custom name for the table and column portions of the column header.
Hide	If you check this option, the column does not appear in the contents of the file. However, a hidden column can be used for sorting, splitting and shuffling.
Override Default Data Format	Overrides the default display characteristics. In the column Properties dialog box, the selections that appear vary based on the data type. For example, if the column contains numeric data, you can choose formatting options, such as percentages, month names, or dates. You can choose the number of decimal places to display, how to display negative numbers, the number of digits to show, and the thousands separator to use. To use a custom format for text, choose Custom Text Format from the drop-down list, and then enter the custom format. To create a custom numeric format, you can use the number sign (#) to include significant digits, and the number zero (0) to include as many digits as specified, even if the number does not contain that detail as shown in the following examples: Specifying ##.# shows 12.34 as 12.3 Specifying ##.000 shows 12.34 as 12.340

Table 7. Column Properties Formatting Options

Format Option	Description
Shuffle Forward	The shuffle forward option makes a column eligible to be moved to the left whenever the column to the left of the shuffled column is empty. For example if Column 1 has an empty value for a row and Column 2 is enabled for Shuffling, the value in Column 2 is written to Column 1. If multiple columns adjacent to the shuffled column (to the left) are empty, the shuffled value slides as far to the left as possible.
Width (for fixed width only)	Width specifies the maximum number of characters that can be entered in the column.

Previewing a Marketing List Format

You can preview the layout of a list format using the Preview tab. To preview the file you provide some test parameters for any system data expression or Segments that are used to constrain the contents of the list.

To preview a list format

1. From Oracle BIEE application, navigate to New - List Format.
2. In the List Format Designer, select a format to preview.
3. Click the Preview tab.
4. Verify that the Destination Folder Path points to a desired location.
5. In the List Parameters area, click Add.
6. Enter a test value for a Segment or System Data expression you have used in the format. If you have used multiple System Data, you can click Add more than once.
7. To generate a preview list of a few records, click Generate Preview.
8. Enter the number of records to preview.
9. To generate a complete file of qualifying records, click Generate List Files.

Adding Marketing List Format Headers and Footers

Use the Headers and Footers page to add text content to the beginning or end of list files that are generated. The content of the header or footer can consist of text plus System Data expressions.

To add a header or footer to a list format

1. From Oracle BIEE application, navigate to New - List Format.
2. In the List Format Designer, select a format.

3 Click the Header and Footer tab.

4 Add any text in the Header Content or Footer Content workspace to be included at the beginning or end of the file.

5 To add a System Data expression, place your cursor in the Header Content or Footer Content workspace, click Available System Data link and select the desired expression.

Options for Marketing List Formats

The Options view tab controls the file type and file formatting for any lists generated using the list format.

- **Purpose.** The intended use of the List Format. The type you choose determines in which folder the list format is saved and where in the Marketing application the list format is visible. For more information, see "About Designing Marketing List Formats" on page 39.
- **Delimited/Fixed Width.** Indicates whether the columns in the file contents are delimited using a character or use fixed width.
- **End of Field Delimiter.** Indicates the character used to delimit the columns in the file.

  To use a special character other than commas, semicolons, spaces, or tabs, select Other and enter another character in the field to the right of the selection.
- **Text Qualifier.** This option wraps the values in each column with a pair of characters. You have the option to use double quotes ("") or single quotes ('').
- **File Name.** The default name includes components for format name, job ID, time stamp, and file counter. You can edit the default name by removing any of these components, and adding in constants (such as your company name). To add more components, click Available System Data.
- **Maximum Record Count.** This option limits the number of rows that can be written to a single file. When the maximum number of records is reached, List Designer starts a new file. The List Designer generate additional files until all records are exported.
- **Include Column Headers.** When you select this check box, the column labels are included as the first row in the file.
- **Order by all Non-measure columns left to right when no column is ordered explicitly.** Check this to order (sort) the list as indicated in the prompt.

4 Configuring Marketing Module Metadata

This chapter describes how to configure marketing module metadata. It includes the following topics:

- About Marketing Segmentation Metadata on page 65
- Setting Up Marketing Segmentation Metadata on page 70

About Marketing Segmentation Metadata

Segmentation is the practice of dividing a customer base into groups that are similar in specific ways such as demographics or behavior that are relevant to marketing. Marketers use segmentation to target groups of customers and allocate marketing resources effectively.

Typically, customer segmentation involves the following activities:

- Collecting data from a variety of sources and integrating the data into a single view of the customer base.
- Determining the quantity of customers or potential customers who share certain characteristics.
- Identifying a group of target customers for the purpose of delivering a marketing treatment or message.

Typically, customer types targeted for marketing messages are individuals, businesses, or households. However, special circumstances might call for segmentation to be performed for other entities such as bank accounts, opportunities, or assets. Segmentation involves grouping these targets based on a specified set of characteristics. You specify these characteristics by executing criteria against the customer data set. The criteria that you use to identify targets can be simple or complex and is usually based on Boolean-type logic using set operations and parenthetical operations.

For example, a marketer might identify high-value customers that have a risk of churn based on the following customer characteristics:

(Customers in the top 10 percent based on total order revenue Or Customers in the top 10 percent based on the volume of orders)

AND

(Customers who have not bought anything in the last 1 year)

AND

(Customers whose average service resolution time exceeds the company average)

By expressing such criteria in a sequential fashion, you refine a group of targets.

Terminology Used for Marketing Metadata

To support the segmentation process, the Oracle BI Administration Tool provides a special set of Marketing metadata. This topic describes the following Marketing metadata entities:

Target Levels

A target level is the entity that a marketer wants to count. Target levels are usually customer types such as individuals, businesses, or households. However, in special circumstances a target level might also represent other entities such as bank accounts, opportunities, or assets.

To support counting, the metadata definition for a target level specifies a column in the database table that uniquely identifies the target such as Customer-ID, Account-ID, or Household-ID. Target levels can be combined in a segment. For example, a segment might be created that counts the number of contacts who live in households that satisfy a certain criteria.

Segmentation Catalogs

A segmentation catalog is an Oracle BI subject area (presentation catalog) that is enabled for segmentation. The segmentation catalog provides a set of dimensions and fact measures that can be used to create segment criteria. The Marketing module user interface combines the counts across segmentation catalogs using the KEEP/ADD/EXCLUDE operators. A segmentation catalog must contain mappings from only one physical star or snowflake schema.

To define a segmentation catalog, use the following guidelines:

- Explicitly associate the presentation catalog with a target level. This makes the catalog visible in the Marketing module user interface.
- Identify the column in the segmentation catalog that needs to be counted for the target level. If the physical star schema of the segmentation catalog does not contain the dimension that needs to be counted for the Target Level, a conforming dimension needs to be identified. For additional information about conforming dimensions, see “Conforming Dimensions” on page 67.
- Specify an implicit fact for each presentation catalog that is enabled as a segmentation catalog. This is required because two different segmentation catalogs can contain the same two dimensions. This can result in an ambiguous query to the database. This implicit fact column must be an aggregate measure that is not filtered. This is typically the measure that counts the primary key column on the fact table.

  For example, there might be many star schemas in the database that have the Campaign dimension and the Customer dimension, such as the following stars:

  - Campaign History star. Stores customers targeted in campaign.
  - Campaign Response star. Stores customer responses to a campaign.
  - Order star. Stores customers who placed orders as a result of a campaign.

    In this example, because Campaign and Customer information might appear in many segmentation catalogs, users selecting to count customers from the targeted campaigns catalog would be expecting to count customers that have been targeted in specific campaigns.

- To make sure that the join relationship between Customers and Campaigns is through the campaign history fact table, a campaign history implicit fact needs to be specified in Campaign History segmentation catalog. Consider the following guidelines when creating segmentation catalogs:
  - Create each segmentation catalog so that all columns come from only one physical star.
  - Because the Marketing module user interface has special features for users to specify their aggregations, level-based measures typically are not exposed to segmentation users in a segmentation catalog.

Sampling Factors

Complex segmentation criteria evaluated against a large database can take significant time to execute. Initially, marketing users might be satisfied with an approximate count so that they can execute counts more quickly, and then adjust the criteria until they obtain more precise counts.

To facilitate quick counts, the Marketing Server can execute segmentation criteria against a sampled subset of the target-level data. Sampling works on the principle that if the segmentation criteria are applied to the sampled subset of customers, and then subsequently to each of the stars accessed by the segment criteria, the final count is a good approximation of the actual (100 percent) counts and executes more quickly.

Sampling is defined by creating a subset table for a target-level dimension table that contains the same set of columns, but only a percentage of the data. For every sampling factor a database table needs to be created. Each sampling definition includes a percentage value to indicate the sampling factor. Every target level can have many sampling factors (and corresponding sampled dimension tables) to provide multiple levels of sampling.

When you enable sampling, the Marketing Server continues to generate the same logical SQL. However, the BI Server generates physical SQL that queries against the configured sample tables using dynamic table names. For the dimension table (such as the Contact dimension table) that contains all target-level IDs, a dynamic table name is associated with the target-level table. If the value of the dynamic table name session variable is set to the sampled table, then all queries executed in that session that include the customer dimension table are executed against the sampled table. The session variable is automatically set to the appropriate sampling table, depending on the sampling factor chosen in the user interface for all counting tasks.

Make sure the sampled table contains a true random sample of the customers. The choice of the randomization method is determined by the business users and administrators. The technique chosen here dramatically affects the degree of accuracy of the sampled counts.

NOTE: Taking the first, specified-percent of rows from a target-level table, does not usually yield a random sample.

Conforming Dimensions

Conforming dimensions can be used when a star might include a dimension with the target-level ID. A conforming dimension links a fact that contains target-level IDs to a fact that does not contain target-level IDs by navigating along a dimension that is shared by both fact tables.

For example, a bank might track service requests at the bank-account level only and the Service Request star does not include the customer dimension. To be able to count the number of contacts who have filed a certain number of service requests, a conforming dimension is required. In this case, the conforming dimension is the Bank Account dimension, because it is a dimension shared by both the Service Request star and another star containing the Bank Account dimension, such as the Customer Profile star. To evaluate this count, the Marketing Server determines the bank accounts that satisfy the service request criteria, and then finds all customers who join to those bank accounts using a subquery. For more information, see "Setting Up Conforming Dimension Links" on page 93.

List Catalogs

Use List catalogs to create vendor files for campaign fulfillment or files for loading a campaign with appropriate targets. An Oracle BI Subject Area is a list catalog in the Presentation layer of the Oracle BI Administration Tool that is enabled for list format design (list generation). The list catalog provides a set of columns that can be used to generate the content in a list file or used to filter the results of the list file. Because not all presentation catalogs are appropriate for use as a list catalog, enabling a list catalog requires the following configuration:

- **Configuration for changing the level of detail of the list generation query.** Unlike a segmentation catalog, a list catalog can contain information from multiple facts and data sources. This is often required because the content of export files might include a set of columns that span across several facts.

  When generating a list, marketers usually need all columns in the list to show information at the target level such as Individual, Account, and Household. However, measures in a report are typically reported by dimensions placed in the report. To make sure that these measures evaluate at the Target Level, the business model for these List catalogs needs modifications. For more information about building a business model, see "Setting Up the Marketing List Catalogs" on page 88. For a standard presentation catalog, a query returns all rows in the data that satisfy the filter criteria, whether or not there is a single row for each target level. For example, if the list format contains columns for Contact Name, Asset Number, and Order Revenue, then the Revenue information is returned for every Asset that the contact owns.

  To compensate for this behavior, a list catalog needs to be configured so that a single row can be returned for each target level when required. This is accomplished by creating a metadata metric that ranks on the secondary attribute by the target level. For example, to pull the first asset for each contact, create a rank on the asset name by contact.

- **Configuration to eliminate query ambiguity.** Often presentation catalogs are created that span the same dimension in multiple facts. For example, if Assets are queried, there is potential ambiguity because it is unclear whether you intended to retrieve assets that the target level (Contact) owns (Asset star), assets that have been serviced (Service Request star), or assets that are expiring (Contracts star). A query from each of these stars likely returns a different set of target-level IDs. In a list generation query, avoid ambiguity about the source of the asset dimension data and related target-level IDs.

  To make sure that dimensional entities such as Assets and fact measures such as Revenue appear at the target level and that ambiguities between dimensions are eliminated, the business model mappings in the Administration Tool needs to be different than what is typically used for reporting. Therefore, an existing catalog used for reporting is usually not appropriate. You must create new business models and new catalogs in the Administration Tool to be specifically used for list output.

List catalogs fall into the following categories, each supporting different business requirements:

- **List Output Catalogs.** When a campaign is launched and a list of targets needs to be generated for channel-related fulfillment, list catalogs are used to extract the members of the campaign and their related contact information. In the Siebel Marketing application, this type of list catalog is used for vendor files (List Export formats) and Email Server formats.
- **Campaign Load Catalogs.** When you finish designing the segment criteria, the next step is to load the target members of the segment into a campaign for execution. Within the Marketing application the task of loading segment members into the campaign history is performed by a workflow process leveraging the enterprise application integration (EAI) interface. This process expects the list file of segment members to be formatted according to EAI specifications, in which each column header must exactly match the name of the Integration Component and Integration Component field name where the data loads. List catalogs used for the Campaign Load process are configured so that the presentation column names match the Integration Component field names expected by the EAI process.

  Lists for campaign load and list output can be invoked from an external application using SOAP APIs and then the Siebel Marketing Server can be integrated into a third-party campaign management system. For more information about SOAP APIs, see *Oracle Fusion Middleware Integrator's Guide for Oracle Business Intelligence Enterprise Edition*.

Qualified List Item (QLI)

A qualified list item (QLI) is an entity that is evaluated against segment criteria so that the information related to that entity can be exported in a list file. A QLI can be of type Primary or Secondary. A primary qualified list item is the presentation column that maps to the dimension key that is being counted for a target level such as Contact-ID for the contact target level. A secondary qualified list item is primarily created for list exports. Use a QLI to restrict the list based on the logic used in the segmentation criteria.

For example, you might have a segment containing all customers who have a vehicle lease expiring in less than two months. You plan to create a list for this segment and Vehicle ID is one of the list columns. If you do not create a secondary QLI, the list contains vehicles that the customers in the segment own and it does not matter if the lease expires in less than two months. If you create a secondary QLI on the Vehicle-ID, the list contains only vehicles with leases expiring in less than two months (qualified) from the segment.

For more information, see "Setting Up Marketing Qualified List Items" on page 94.

Caching

Segmentation criteria blocks that count target-level identifiers can be used frequently. For example, an email marketer can always exclude contacts with no email address or those that have explicitly refused to receive emails. Instead of evaluating this set of contacts repeatedly in every segment, the marketer might create a single criteria block using this criterion. Caching such a criteria block saves the list of target-level identifiers in a table. When you reuse this criterion across segments that you create, the cache is used and time-consuming database query operations are minimized, improving throughput.

The set of tables that contain the cache information, the mappings of those tables in the Administration Tool, and assigning cache table schema to specific target levels, constitute the cache related metadata.

Saved Result Sets

The resulting set of target-level identifiers of complex segmentation criteria can be saved permanently (until explicitly deleted). The saved result set can be used in other segments but more importantly it can be used to keep track of which targets joined and left a segment. This kind of an analysis helps marketers understand the dynamic behavior of the customer base. The target-level identifiers are stored in a table. The set of tables that contain the saved result set information, the mappings of those tables in the Administration Tool and the assigning of saved result set schema to specific target levels, all constitute the related metadata.

Setting Up Marketing Segmentation Metadata

The setup instructions in this section assume that you have mapped the business models for reporting purposes and created some presentation catalogs.

The following topics describe the setup of Marketing metadata:

- Create Segmentation Catalogs for Physical Star Schemas on page 71
- Assign an Implicit Fact in the Segmentation Presentation Catalog Property on page 71
- Creating Target Levels and Adding Segmentation Catalogs on page 72
- About Setting Up Cache for Target Levels on page 74
- Setting Up Cache for Target Levels on page 76
- Enable Sampling for the Target Level on page 79
- Setting Up Saved Result Sets for Target Levels on page 82
- Setting Up the Marketing List Catalogs on page 88
- Setting Up Conforming Dimension Links on page 93
- Setting Up Marketing Qualified List Items on page 94

■ Controlling Marketing Vendor List Query Details on page 97

Create Segmentation Catalogs for Physical Star Schemas

You must create a Catalog for every physical star schema that needs to participate in segmentation. Typically, this requires performing the following tasks:

- Creating new catalogs.
- Dragging presentation columns from other reporting catalogs into the appropriate segmentation catalogs.
- If certain measures are absent in existing reporting catalogs, they must be brought into the segmentation catalogs from the business model layer.
  - Do not bring level-based measures in to the segmentation catalog, unless there is a specially mapped measure that improves performance drastically. The Marketing module user interface provides for aggregating measures.
  - Do not bring in measures that are ratios based on a combination of stars. For example, Opportunity to Order Conversion Ratio. Remember, each segmentation catalog must contain information from one star only.

    When marketers want to segment on a star where they want to counts customers where the rows in the fact table satisfy a certain criteria then the fact table can be mapped as a dimension also. For example, if a marketer wants to find customers where any of their orders is greater than $50, then to support this kind of a querying, the order fact logical table needs to be mapped as dimension.

Assign an Implicit Fact in the Segmentation Presentation Catalog Property

For every segmentation catalog, you must assign an implicit fact in the presentation catalog property. Use the following guidelines when you select the implicit fact column:

- The implicit fact column must be based on the same fact around which the presentation catalog has been built. For example, if the presentation catalog contains information from the Order star, the implicit fact column must be based on the Order/Order-Item fact.
- The implicit fact is the least restrictive. For example, if the ROW_WID column in the fact table is the primary key of that table, then the implicit fact column is a Count (ROW_WID). If no such measure exists in the Logical Fact then create it. Alternatively, you can define a logical column that has a calculation such as max(1) or sum(1).

To assign an implicit fact in the presentation catalog property

1. In the Presentation layer of the Administration Tool, double-click a presentation catalog to participate in segmentation.

2 In the Presentation Catalog dialog box, click the General tab.

3 In the Implicit Fact Column section, click Set.

The logical facts in the business model from which the presentation catalog was created appear.

4 In the Browse dialog box, open the appropriate logical fact folder such as Fact - Campaign History, select the appropriate measure, and then click OK.

Guidelines for Testing an Implicit Fact in the Presentation Catalog Property

Use the following guidelines to test the inclusion of implicit fact after starting the Oracle BI Server.

- Navigate to Oracle BI Answers.
- Select the presentation catalog and create a report by selecting two dimensional attributes that have ambiguity with respect to facts.
- Do not put the fact column in the report.

  For example, in an Order/Order-Item catalog, select a column from the Customer table and another column from the Product table.

  Customer and Product are typically related in many ways. Customer could have service requests for a product, they might own an asset on a product or they might have quote or an order on a product. However, when running this report on this catalog with the implicit fact assigned, verify that the physical query included the order/order-item fact.

Creating Target Levels and Adding Segmentation Catalogs

Customers who have purchased the Data Warehouse version 7.7.1 have preconfigured Contact and Account target levels. In the Data Warehouse version 7.7.1, most stars in the application have a corresponding presentation catalog and have been added to the preconfigured target level.

Every target level must have a primary segmentation catalog. Every time a target level is selected in the Marketing module user interface, the primary catalog is selected by default as the starting catalog for segmentation. For example, if the target level is Customer, a primary catalog counts every customer in the database.

NOTE: You are not required to start the segmentation from this catalog.

You can create as many target levels as you need. When creating target levels and primary QLI, use the following guidelines:

- You can associate the same primary QLI with multiple target levels.
- Any dimensional entity can be used as target level depending on the business need. For example, Asset, Order, Opportunity, Product, and so on.

You can duplicate existing target levels. Duplicating a target level also duplicates its segmentation catalog children, the sampling tables, and the qualifying keys related to the segmentation catalog.

To create target levels

1. In the Administration Tool, open your repository.
2. From the menu bar, click Manage > Marketing.
3. In the Marketing Metadata dialog box, in the left pane, click Target Levels.
4. Right-click in the right pane and select New Target Level.
5. In the Target Level dialog box, in the General tab, type the name of the target level in the Name field.
6. (Optional) To restrict the visibility of a target level, click Permissions and select the appropriate options.
7. (Optional) To assign a custom display name to the target level, check the Custom display name check box and add a different string in the box next to it.

   This string appears in the Marketing module user interface.
8. To create and assign a new primary qualified list item to this target level, perform the following steps:
   a. Click New next to the Primary Qualified Item field.
   b. Type the name of the qualified list item (QLI) in the Name field.
   c. Type a description that describes the technical details of this QLI, especially information on what specifically it counts.

      NOTE: For information about the Cache Information tab, see the topic about creating and mapping a Marketing presentation catalog in "Setting Up Cache for Target Levels" on page 76.
9. If a primary qualified list item for this target level has already been created, you associate the primary with the target level by clicking Browse and selecting the qualified list item.

Repeat this task to create each target level that you need.

To select a primary segmentation catalogs for the target level

1. From the toolbar, choose Manage > Marketing.
2. In the left pane, highlight Target Levels and in the right pane, double-click a target level.
3. In the Target Levels dialog box, click the Segmentation Catalogs tab.
4. To select a primary segmentation catalog, click the Segmentation Catalog tab.

   If queried from this catalog, the result is a superset of the target level.
5. In the Segmentation Catalog tab, select one of the segmentation catalogs and click Set Primary.

To add segmentation catalogs to an existing target level

1. From the toolbar, choose Manage > Marketing.
2. In the left pane, highlight Target Levels.
3. In the right pane, double-click a target level.

4 In the Target Levels dialog box, click the Segmentation Catalogs tab and then click Add.

5 In the Segmentation Catalog dialog box, click the ellipsis button.

6 In the Browse dialog box, select a presentation catalog to include in the segmentation process.

7 Click Permissions if you want to restrict the visibility of this catalog to a specified group of users or groups.

8 For the Qualifying Keys area, click Add.

In the Qualifying Key dialog box, the Qualified List Item field contains the primary QLI. It is preselected based on the target level in the segmentation catalog that you select in Step 6 on page 74. A primary QLI key is required unless the segmentation catalog uses conforming dimensions.

CAUTION: Do not change the preselected primary QLI, unless the catalog uses conforming dimensions.

9 Click Browse next to the Column field.

10 In the Browse dialog box, select the presentation column that represents the unique identifier of the target level.

The list contains all the columns in the presentation catalog that you added as a segmentation catalog.

Repeat this task for every segmentation catalog that you want to add to the target level.

To duplicate a target level

1 In the Administration Tool, open your repository.

2 From the menu bar, click Manage > Marketing.

3 In the Marketing Metadata dialog box, in the left pane, click Target Levels.

4 In the right pane, right-click a target level and choose Duplicate.

About Setting Up Cache for Target Levels

Marketing Server Cache has the following distinct properties:

- Criteria blocks are not cached by default. Users have to explicitly select the criteria blocks that they want to cache. This behavior is different than that of the Oracle BI Server cache. The exception is with segment trees where segment and remainder nodes are automatically marked for caching. In general, these nodes make good candidates for caching because the SQL to compute these nodes are usually expensive.

- Marketing Server Cache is temporary and it expires after a certain time. This is unlike the Oracle BI Server cache that is recycled based on disk size limit specified. The expiration time is configurable and is set in the following file:

  SiebelAnalyticData\Web\Config\instanceconfig.xml file

  The name of this parameter is MarketingCacheMaxExpireMinutes. When this value is not set, the default value used by the Marketing Server is 24 hours.

- Marketing Server Cache is stored in multiple tables with a fixed schema for each target level, unlike the Oracle BI Server cache that is stored in a file system.

- Marketing Server Cache entries are managed through the Administration link in the Oracle BI user interface, unlike the Oracle BI Server cache that is managed through the Administration Tool. These entries can be found under the Database Cache section after you click Manage Marketing Jobs link.

- Caching of the same entity with different sampling factors creates different cache entries for each sampling factor for which the counts were run. If a criteria block was cached for a 20 percent sample and then, if counts are run for a sampling factor that is different, cache is not used.

- When updating counts, you can select the Refresh Query Cache property to make sure that you only query against the latest data. Any cache entries that would have been reused are deleted during this job.

Managing Marketing Cache

If you purchased the Siebel Data Warehouse version 7.7.1, the cache tables have been preconfigured and appropriately modeled in the Administration Tool. Use this topic to support users, troubleshoot issues, and maintain the cache tables. Perform the steps outlined in this topic if you create new target levels that were not preconfigured with the product.

To understand and maintain the Marketing Server cache, follow these guidelines:

- Set the expiration parameter for the marketing cache to a value such that maximum response time efficiency is gained. The value is typically less than the database refresh frequency.

- After the database is refreshed, purge the affected caches before you start using segmentation.

- Cache can be removed for each user. For example, the cache entries that were created by a particular user can be removed without deleting all of the cache entries.

- Individual cache entries for a user cannot be deleted. You can delete all cache for a user or none.

- There is a limit to the number of cache entries that can be managed by the Marketing Server at any given time. This information is specified by the MarketingCacheMaxEntries parameter in the SiebelAnalyticData\Web\Config\instanceconfig.xml file. After the limit is reached then the oldest cache entries are removed approximately 20 percent at a time. The entries are removed from Oracle BI and the specific Cache information is deleted from the database table.

- When Caching a criteria block, if the criteria block SQL can be fully function shipped to the database, then evaluation of the criteria block and the population in the cache is done in one single operation for efficiency purposes. If the criteria block SQL cannot be function-shipped then cache is created in two steps where the first one evaluates the criteria block and the second step populates the target-level IDs into the cache.

- The references to the cache entries are maintained in the Oracle BI Web Catalog. Therefore, if the Catalog file is replaced, then entries from the old catalog file are typically moved to the new catalog file.

Recommendations for Using Cache

The following are some recommendations for when to use cache:

- Criteria blocks that are used in segmentation by a user might be used frequently across the segments created by that user. For example, a product manager for a particular product might only be interested in customers who own that product. Most of the segments created by this manager might include a criteria block that specifies owners of that product. To minimize resource-intensive database operations, cache the results of frequently used criteria blocks and use this cache for subsequent queries.
- When using complex criteria in a criteria block, especially against a large table, it may take a long time for the counts to return.
- When you use complex segmentation logic that spans criteria blocks and issues a large number of queries against the database, it usually takes a lot of time to evaluate. Save the segmentation logic as a separate segment and use it as a nested segment inside the full segment report. This type of nested segment is a good candidate for caching.
- When the use of a segmentation logic issues a query that is not directly supported by the database, these queries might be evaluated by the Oracle BI Server. For example, a database platform might not support the intersect operator in its SQL syntax. This operator is used when the you use the Keep operator for a criteria block in the Marketing module user interface. When such a criteria block is evaluated with other blocks, the intersect operation does not occur in the database and is evaluated by the Oracle BI Server. To improve response time for users of Oracle BI Server (Marketing module and BI reports), cache the results of such a logic.

  NOTE: If you need to run the same query again, the results can be retrieved directly from a database cache.
- Caching is automatically used by the Marketing Server when splitting nodes in a segment tree, where the splitting logic requires the calculation of intermediate results. For example, when Random Splitting is used.
- When Caching a criteria block the gross count and not the cumulative count is cached. This is because if criteria block is moved within the segment, the cached results can be reused.

Setting Up Cache for Target Levels

This topic discusses the following topics about setting up cache for target levels:

- About Marketing SQL Files and Cache on page 77
- Building a Marketing Business Model on page 77
- Creating and Mapping Marketing Presentation Catalogs on page 78

About Marketing SQL Files and Cache

In the Oracle BI install directory, there is a directory named schema. This directory contains the preconfigured Marketing SQL files: MKTG.DB2.sql, MKTG.MSSQL.sql, and MKTG.Oracle.sql.

These files contain the DDL (data definition language) statements for creating the cache and the saved result set tables. Depending on the database that you use for segmentation, open the appropriate file and execute the statements against the database. For more information about the SQL files and cache, see "About Marketing SQL Files and Saved Result Sets" on page 83.

The following guidelines apply to using the Marketing SQL files with cache:

- Make sure that the statements are syntactically correct for the version of the database that is being used. For example, the MKTG.DB2.sql file might not contain the appropriate syntax for the specific version of DB2 that is being used.
- Make sure that the data types of the QUALIFIED_ID column matches the data type of the target level. For example, if a cache table is being created for the target-level Household and the Household ID in the database is of type INT, then the QUALIFIED_ID must be of the same type.
- For every target level a separate table needs to be created. The naming convention for the table is M_C_<*target level*>. Although the cache table can be named with any name that is database supported, for the purposes of the following discussion the existing naming convention is assumed.
- Do NOT change the name and type of the GUID column.

  The value in the GUID column is a unique identifier that identifies the saved result set.
- Execute the statement that relates to creating the Cache table and the corresponding index.
- For information about statements relating to the creation of Saved Result Sets, see "Setting Up Saved Result Sets for Target Levels" on page 82.

Building a Marketing Business Model

This topic contains guidelines for building your marketing business model in the Business Model and Mapping layer of the BI Administration Tool. Figure 1 is an example to help you build your business model.

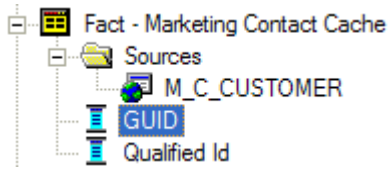


Figure 1. Example of a Mapped Fact Table

The following examples describe the business model structure that appears in Figure 1:

- Mapping Fact Tables. Use the following convention, or a similar convention, when naming fact tables:

Fact - Marketing <*target level*> Cache

For example, for the target level Contact, a table might be named Fact - Marketing Contact Cache.

- Building a join in the business model. After mapping a fact table, you must set up a join only in the Business Model and Mapping layer as described in the following example:

  The corresponding logical dimension table for the target level is joined to the Fact - Marketing <*target level*> Cache. The join must be a logical 1:M join starting from the target level logical dimension table (1) and going to the Fact - Marketing <*target level*> Cache logical table (M).

Creating and Mapping Marketing Presentation Catalogs

Create a marketing presentation catalog by performing the following tasks:

- Create a folder named Cache.
- Create a marketing presentation table. Name the Cache presentation table using the following convention:

  <*target level*> Cache (This identifies the cache that belongs to each target level.)

- Add columns to the marketing presentation table. For example, add the GUID column and the Qualified-ID column to the <*target level*> Cache folder by dragging them from the Fact - Marketing <*target level*> Cache logical table, shown in Figure 1 on page 77.
- Associate cache metadata with a target level.

  NOTE: Any Marketing user who writes a cache entry or saves a result set needs to be assigned the POPULATE privilege for the target database. Typically, Marketing users are associated with a group and this group is granted the privilege. Go to Manage->Security and open the Permissions dialog for either a user or group. Select the Query Limits tab and set the Populate Privilege to Allow for Marketing data warehouses. For more information, see the topic about assigning populate privilege to a User or Group in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

To associate the cache metadata with a target level

1. In the Administration Tool, open your repository in Offline mode, using Administrator/ <*password*>.
2. From the toolbar, choose Manage > Marketing.
3. In the left pane, select Qualified List Items and double-click the primary QLI of the target level to enable for caching.
4. Click the Cache Information tab and perform the following steps:
   a. Click the Cache Catalog ellipsis button and select the presentation catalog that has the presentation table for the Cache table for the target level.
   b. Click the GUID column ellipsis button and select the presentation column that has the GUID information.

c Click the Qualified Id column ellipsis button and select the presentation column that has the qualified ID for the target level.

The columns and catalogs selected are the same as those that you mapped. The physical table and connection pool information is automatically selected.

5 Verify that the information is correct. If not correct, verify that you selected the correct presentation catalog and columns as instructed in Step 4 on page 78.

6 Click Default SQL.

A statement that is similar to the following appears:

```
DELETE FROM M_C_<target level> WHERE GUID = '@{guid}'
```

NOTE: Make sure that the syntax of this statement is correct for your database. The table name might need to be fully qualified. Test this statement by inserting some value in the database table and using the delete statement to delete it.

7 Click OK, and then check the Marketing metadata for consistency.

Enable Sampling for the Target Level

To set up sampling for a given target level, you must copy the relevant tables and map the copied tables into the metadata. Use the guidelines in the following topics:

- Create the Underlying Physical Sampling Tables on page 79
- Map the Sample Tables into the Marketing Metadata on page 80

Create the Underlying Physical Sampling Tables

The first step is to create the underlying physical tables. This step must be completed by an administrator.

- First identify the desired target level and sampling factor.
- Generate DDLs for all physical dimension and fact tables to be sampled.
- Rename the physical table and index names to include the target level and sampling factor. For example, if the original table name was W_PERSON_D. A sampled table name for a 1 percent sample of Contacts could be M_C1_PERSON_D.
- Populate M_C1_PERSON_D with 1 percent of W_PERSON_D.
- Set up the join relationship between the sample contact table and the remaining sampled tables. For example, to populate a campaign history sample table, you would include fact records that join to the sample contact table.

Map the Sample Tables into the Marketing Metadata

After you create and populate the sample tables, you can map them into the Marketing Metadata. Sampling works by using dynamic table names. If a base table such as W_PERSON_D is sampled, the physical table object uses a dynamic name that is based on a session variable. At run-time, depending on the selected sampling factor, the value of the session variable is set to the physical sample table. This causes the BI Server to generate the physical SQL against the sampled table (not against the original base table).

- For each dimension or fact table that you have sampled, create a corresponding session variable. For example, if you sampled W_PERSON_D, you need a session variable named SAMPLE_W_PERSON_D. The initialization block for this variable needs to default the variable value to the original table name, in this case, W_PERSON_D. The same session variable is used across different sampling tables.
- For all sampled tables, find the base physical table object and set the dynamic table name to use the session variables created in the previous step.
- In the Target Level, in the Sampling Tables dialog box, type all the physical sample tables that you created for this target level and sampling factor combination. The Sampled Physical Table Name corresponds to the actual table name in the database. The Repository Table Object corresponds to the table for which you set the dynamic table name. The Factor corresponds to the percentage at which you sampled the table.

Example of How to Map the Sampling Tables into the Marketing Metadata

The example in this topic assumes that the tables needed for obtaining sampled counts on the target level have been created. To correctly map the sampling tables, perform the procedures in this topic in the sequence shown.

To set up session variables for mapping sampling tables to the marketing metadata

1. Shut down the Oracle BI Server and the Oracle BI Presentation Services.
2. In the Administration Tool, open your repository.
3. Map all the sample tables in the physical layer by performing the following steps:
   a. From the toolbar menu, choose Manage > Variables.
   b. In the left pane, select Initialization Block, and then in the right pane, right-click and choose New Initialization Block.
   c. In the Initialization Block dialog box, type the following information in the appropriate fields:
      - From the drop-down list under the Name field, choose associate with session variable.
      - In the text box, the string (SAMPLE in the example) is not a significant value. You can type any string.
      - In the Connection Pool field, choose the connection pool in which the sample table has been mapped.
4. Click the Variables tab, then click New.

5 In the Session Variables dialog box, from the Type drop-down list, select Session.

6 Check the following check box so that non-administrators can set this variable for sampling:

Enable any user to set the value

7 In the Default initializer text box, click the ellipsis button.

8 In the Expression Builder dialog box, select the target-level table (the dimensional table that represents the target level).

9 Click OK three times, and then close Variable Manager dialog box.

To map sampling tables to the marketing metadata

1 In the Physical layer, expand the Physical database in which the target-level table and its samples exist, and then double-click the target-level table name.

2 In the Physical Table dialog box, click the Dynamic Name tab.

3 Select the Marketing Customer Sample Table variable in the list and perform the following steps.

a In the Dynamic Name tab, click Select.

b Verify that the read-only field shows the name of the variable, and then click OK.

4 From the toolbar menu, choose Manage > Marketing.

5 In the Marketing Metadata dialog box, perform the following steps for every sampling table for this target-level table.

a In the left pane, click Target Levels, and then in the right pane, double-click Customers.

A target level named Customers is preconfigured.

b In the Target Level dialog box, click the Sampling Tables tab, and then click Add.

c In the Sampling Table dialog box, complete the fields.

Some of the fields are described in the following table.

Field	Description
Repository Table Object	Select a target-level table from the list of tables.
Factor	The number that represents the following calculation: (# of rows in the sample table *100)/# of rows in the Target Level Table

6 In the Sampling Table dialog box, click OK, and then in the Target Level dialog box, click OK.

7 In the Marketing Metadata dialog box, from the Action menu, choose Check Marketing Metadata Consistency.

8 In the Oracle BI Tool dialog box, click OK, and then close the Marketing Metadata dialog box.

9 Click the save icon, and when asked if you want to check global consistency, click Yes.

For information about saving a repository and checking global consistency, see *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition.*

Setting Up Saved Result Sets for Target Levels

Typically, you use saved result sets to study the changing behavior of customers. Results of a segment or a segment tree node can be saved from time to time and analysis can be performed on the remaining and new targets.

Although the saving operation is very similar to caching, the following list explains the differences that apply to saved result sets:

- Saved Result sets are permanent and do not expire.
- Saved Result sets have to be specifically purged.
- The ability to purge is available to all segmentation users, not just the administrator.
- Multiple saved result sets can be created for a segment or segment tree.
- Saved result sets can be specifically used when nesting segments inside another segment or in segment tree reports.

The information in a saved result is stored in a database schema. There is one table that captures the header information in a saved result set, and one table for every target level that stores the Target-Level ID information for each saved result set.

Table 8 contains the information about the saved result set header table.

Table 8. Header Information in a Saved Result Set

Header Field	Description
GUID	Unique identifier to identify the saved result set
SEGMENT_PATH	Path name of the segment report in the Oracle BI Web Catalog
SR_CUSTOM_LABEL	A user-created text literal for the saved result set
PRIORITY	Node priority
NODE_PATH	Branch ID number for a branch in the segment tree
NODE_LABEL	Label text of a priority node in the segment tree
TARGET_LEVEL	Name of the target level for which the saved result is being created
CREATED_BY	Login ID of the user who created the saved result set
SRS_COUNT	Number of target level IDs in the Saved result set
DATE_TIME	Date and Time when the Saved result set was created

Table 8. Header Information in a Saved Result Set

Header Field	Description
SR_PATH	Refers to the Saved result set list format that was used
CONNECTION_POOL	Connection pool that was used to write the saved result set

Table 9 contains the header information about the Target-Level ID for each saved result set.

Table 9. Target-Level ID information for Each Saved Result Set

Header Field	Description
GUID	Unique identifier of the saved result set. This is the same as that in the header table
TARGET_LEVEL_ID	Column that stores the target level IDs that qualified for this saved result set
OFFER_CODE	Standard attributes
CHANNEL	Standard attributes
TAG_01 .. TAG_15	Extra columns to hold custom attributes or columns

Use this information to help you understand and maintain the Marketing Server saved result sets. Repeat the following topics in this section for every target level that needs to be enabled for saved segment results:

- Managing Saved Result Sets on page 83
- About Marketing SQL Files and Saved Result Sets on page 83
- Guidelines for Creating Saved Result Set Tables in the Database on page 84
- Mapping and Joining Saved Result Tables on page 84
- Associate Mapping with a Target Level on page 88

Managing Saved Result Sets

If you purchased the Siebel Data Warehouse version 7.7.1, the data warehouse tables have been preconfigured and appropriately modeled in the Administration Tool. Use this topic to support users, troubleshoot issues, and maintain the saved result set tables. Perform the steps outlined in this topic if you create new target levels that were not preconfigured with the product.

About Marketing SQL Files and Saved Result Sets

In the Oracle BI install directory, there is a directory named schema. This directory contains the preconfigured Marketing SQL files: MKTG.DB2.sql, MKTG.MSSQL.sql, and MKTG.Oracle.sql.

These files contain the DDL (data definition language) statements for creating the cache and the saved result set tables. Depending on the database that you use for segmentation, the appropriate file is opened and the DDL statements is executed against the database. For more information about the SQL files and cache, see "About Marketing SQL Files and Cache" on page 77.

Guidelines for Creating Saved Result Set Tables in the Database

The following guidelines apply to using the Marketing SQL files with saved result sets:

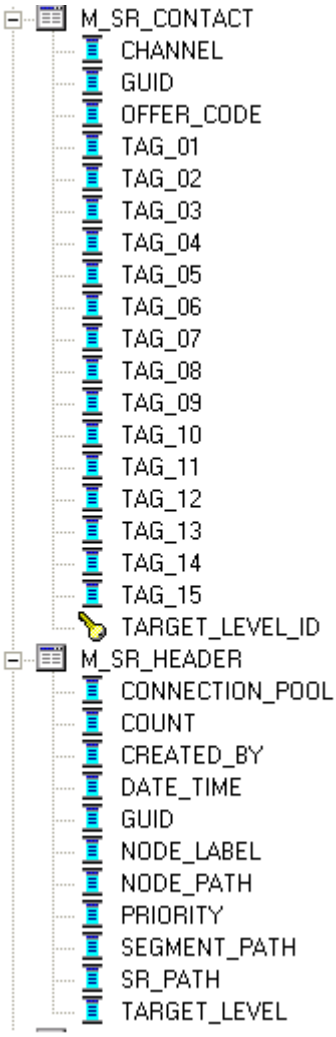
- Make sure that the statements are syntactically correct for the version of the database that is being used. For example, the MKTG.DB2.sql file might not contain the appropriate syntax for the specific version of DB2 that is being used.
- Do not modify the name of the result Set header table and its columns. Do not change the data type of the columns unless absolutely necessary.
- Make sure that the data types of the TARGET_LEVEL_ID column matches the data type of the target level. For example, if a cache table is being created for the target-level Household and the Household ID in the database is of type INT, then the TARGET_LEVEL_ID must be of the same type.
- For every target level a separate table needs to be created. The naming convention for the table is M_SR_<*target level*>. Although the cache table can be named with any name that is database supported, for the purposes of the following discussion the existing naming convention is assumed.
- Do not change the name and type of the GUID column.
- Execute the statement that relates to creating the Saved Result header and the saved result set table and the corresponding index.

Mapping and Joining Saved Result Tables

Use this topic to map saved result tables and join them to target-level dimension tables.

To map saved result tables and join the tables to target-level dimension tables

1 In the Siebel Administration Tool, in the Physical Layer, map the header table and the result set table using the following illustration as a guide.



a Create an Alias of the header table. There must be one alias for each target level.

In the illustration, the tables M_SR_HEADER (Account) and M_SR_HEADER (Contact) are examples of this type of alias.

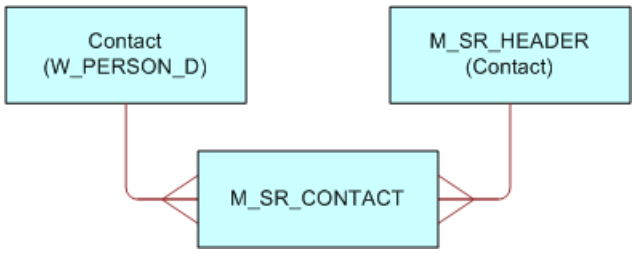
b When naming the alias table, use the following naming convention:

M_SR_HEADER <*target level*>

2 Join the tables in the Physical Layer using the following formats:

Join 1: <*target level Table*>.<*Unique ID*>=M_SR_<*target level*>.TARGET_LEVEL_ID

Join 2: M_SR_HEADER (Target Level).GUID=M_SR_<*target level*>.GUID

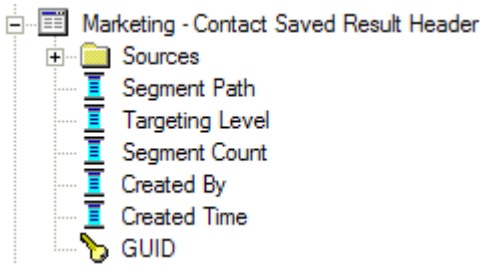


Using the previous illustration as a guide, replace the values in the example with the values in the following list:

- Contact (W_PERSON_D) with the Target Level table
- M_SR_HEADER (Contact) with M_SR_HEADER <*target level*> alias
- M_SR_CONTACT with M_SR_<*target level*> table.

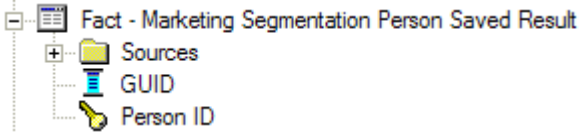
3 Create a business model using the following guidelines:

a Map the M_SR_HEADER (Target Level) table as a Logical Dimension Marketing - <*target level*> Saved Result Header. Use the following illustration as a guide.

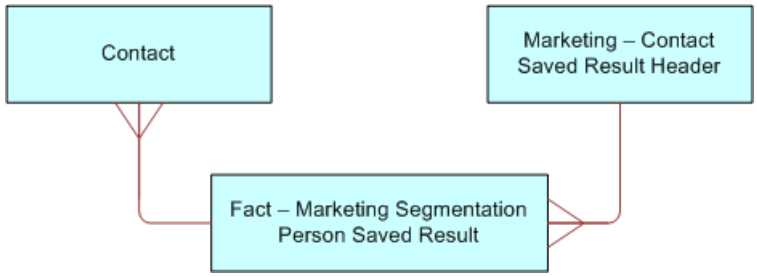


b Map the M_SR_(Target Level) table as a Logical Fact using the following illustration as a guide, and then name your table using the following convention:

Fact - Marketing Segmentation <target level> Saved Result

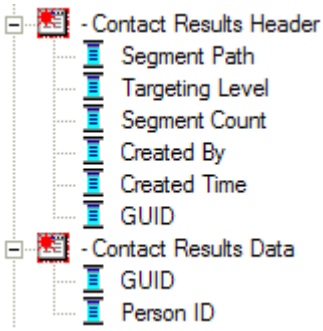


c Create Logical Joins in the Business model layer, using the following illustration as a guide.



- Replace Contact (logical dimension table) with the logical dimension table name of your target level.
- Replace Marketing - Contact Saved Result Header with your Marketing <target level> Saved Result Header logical dimension table name.
- Replace Fact - Marketing Segmentation Person Saved Result with your Fact - Marketing Segmentation <target level> Saved Result Logical Fact table name.

4 Create a presentation catalog and folders using the following illustration as a guide. The cache presentation catalog and the saved result presentation catalog can be the same catalog.



Rename the presentation folders, replacing Contact with your target level name. The following list explains the way you create your catalog and folders:

- Replace Contact Results Header with <*your target level*) Results Header.
- Replace Contact Results Data with <*your target level*) Results Data.

  (<*your target level*> Results Data contains columns from the Fact table.

5 Check Global Consistency, resolve any issues, and save your repository before continuing.

Associate Mapping with a Target Level

Follow the guidelines in this topic to associate mapping with a target level.

1. In the Administration Tool, from the Manage menu, select Marketing.
2. In the left pane, select Target Levels and double-click the target level for which you want to enable Saved Result Sets.
3. In the Target Level dialog box, click the Saved Result Sets tab, and click the ellipsis button.
4. In the Presentation Layer section, complete the following information:
   a. Saved Result Catalog. Select the presentation catalog created in Step 4 on page 87.
   b. GUID Column. Select the GUID presentation column as shown in Step 4 on page 87.

      This is the GUID column in the <target level> Results Data folder.

      CAUTION: Do not select the GUID column form the <*target level*> Results Header folder.
   c. Target Id Column. Select the Target Level ID or a corresponding column from the <*target level*> Results Data folder.
5. In the Physical Layer section of this dialog box the following information is automatically populated:
   a. Physical Table Name. This is the name of the physical table that stores the result set for that target level. Verify that it is M_SR_<*target level*>.
   b. Connection Pool. This is the connection pool in which M_SR_<*target level*> was mapped.
6. Click Default SQL statements. The following information is automatically populated.
   a. Physical SQL to insert the Saved Result Header.

      This is the SQL that the Marketing Server uses when a user tries to save a result set. The @... variables is substituted by the Marketing Server.
   b. Physical SQL to delete the saved result set header.

      When a user Purges a Saved result set this SQL is issued to delete the header information.
   c. Physical SQL to delete the saved result data set.

      When a user Purges a Saved result set this SQL is issued to delete the header information.
7. Verify the column names in the SQL statements and test these SQL statements by executing against the database to make sure the syntax is correct.

   These table names might need to be fully qualified, depending on the database syntax.

Setting Up the Marketing List Catalogs

Setting up list catalogs is very similar to setting up any presentation catalog. A List catalog is used to generate a list of data at the target level. Lists are generated from a user interface (similar to Oracle BI Answers) that issues queries against the Oracle BI Server.

Customers who purchase the Siebel Data Warehouse version 7.7.1 that contains Oracle BI metadata might find that for each of the target levels (Accounts and Contacts) one business model has been created. The following subject areas for list generation are preconfigured for your use:

- **Marketing Account List.** Based on Marketing Account List Business model this catalog is used for List output generation at the Account target level.
- **Marketing Contact List.** Based on Marketing Contact List Business model this catalog is used for List output generation at the Contact target level.
- **Campaign Load - Accounts.** Based on Marketing Account List Business model this catalog is used for generation of data used by the Siebel EAI Campaign load process for the Account Target Level.
- **Campaign Load - Contacts.** Based on Marketing Contact List Business model this catalog is used for generation of data used by the Siebel EAI Campaign load process for the Contact Target Level.
- **Campaign Load - Prospects.** Based on Marketing Contact List Business model this catalog is used for generation of data used by the Siebel EAI Campaign load process for the Prospect Data only.

These topics contain guidelines that you must apply when creating a Business Model in the Administration Tool for a list catalog. Marketers have similar requirements when it comes to list generation. Therefore, this topic contains the following topics for you to use as guidelines when setting up your list catalogs:

- Gather a List of Facts and Dimensions on page 89
- Define the Logical Fact on page 89
- Including Fact Information in List Reports on page 90
- Business Models Extended for List Generation on page 91
- Setting Up Cross-Database Joins on page 92
- Multiple Addresses for Individuals or Accounts on page 92

Gather a List of Facts and Dimensions

Gather the list of facts and dimensions that need to be used for the generation of the List. For every dimension, identify the fact that relates this dimension to the target level Dimension. When this dimension is mapped as a logical dimension in the Administration Tool, this fact is included in the logical table source as a join. Not doing so may result in ambiguous queries and incorrect list results.

Define the Logical Fact

The logical fact of this business model is usually non-restrictive but needs to be defined. In most business models, including the ones that are used for segmentation catalogs, the <*target level*> logical tables are mapped as dimensions. Therefore, these business models might not be used for generating lists. You must create new business models. This topic explains how to create these business models.

Logical dimensions are joined to a logical fact table, as shown in Figure 2.

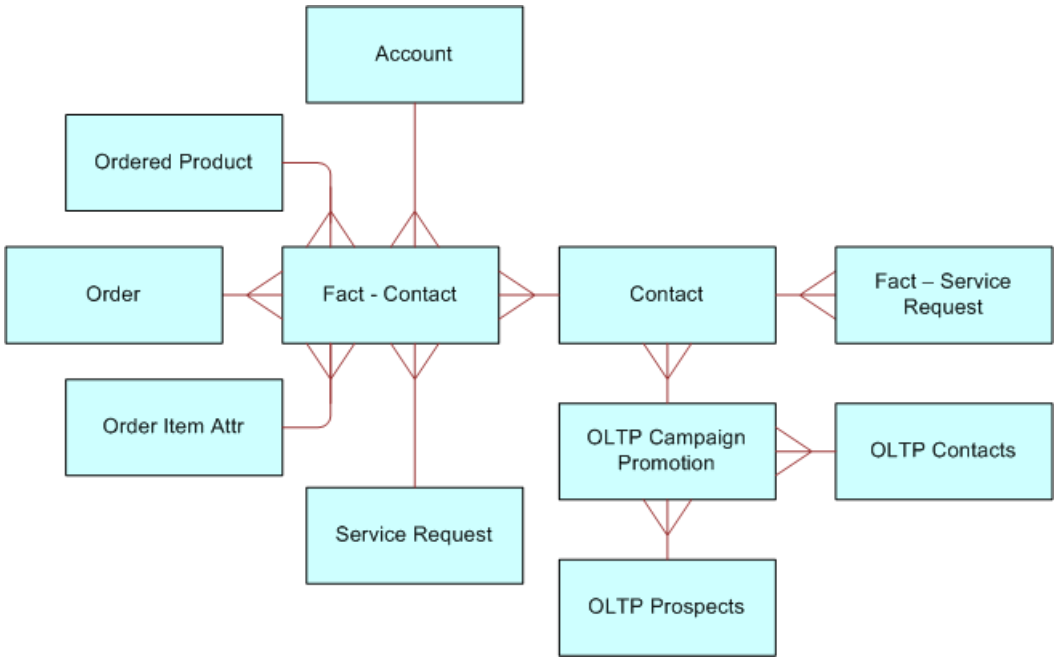


Figure 2. Example Logical Dimensions Joined to a Logical Fact Table

Including Fact Information in List Reports

If fact information needs to be included in the list reports, then each dimension needs to be mapped as dimension hierarchy. This is done because facts usually must be reported at the target level and not any other level. For example, if a list report contains the target level ID column such as Contact ID, Asset Name Column and a fact such as Total Value of Assets, then usually marketers require that the Total Value of Assets be reported at the Contact Level and not for every asset.

In Figure 3, the Service Request fact is included in the business model but needs to be reported at only the Contact level and not the Account dimension. Therefore, a Service Request related facts have been set at the All level of the Account Dimension. The Oracle BI Server reads this information and interprets that there is no detail service request information in the database for Accounts and as a result, issues a physical SQL query for service requests that does not include Accounts.

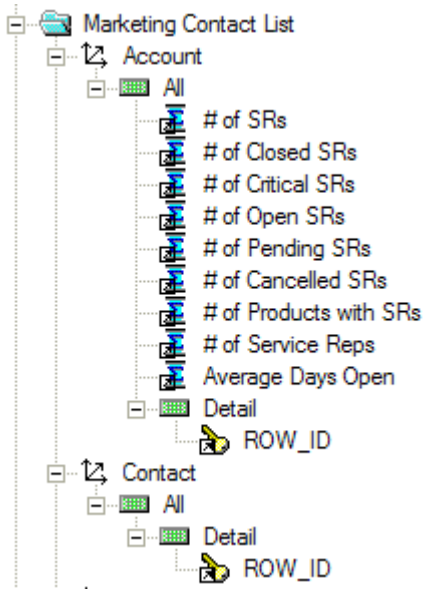


Figure 3. Example of Service Request Fact Reported at the Contact Level

Business Models Extended for List Generation

Customers who have purchased the Siebel Marketing product line from Oracle and who own the Siebel-provided List business models, have business models that have been extended to make sure that list generation occurs from contact information that resides in the transactional database. This is needed when marketers have added or deleted contacts manually after a campaign is loaded in the campaign contact table. When this happens, the list of target level IDs (contacts) as provided by the segment or segment tree, do not match what is in the campaign load. As a result, the output list needs to be generated from the transactional database campaign promotions table.

In the data model, this table is the S_CAMP_CON table (OLTP Campaign Promotion). Figure 4 on page 92 illustrates the following:

- The OLTP Campaign Promotion (S_CAMP_CON) table is snowflaked between the OLTP Contacts (S_CONTACT) table and the Contact (W_PERSON_D) table.

- The OLTP Campaign Promotion (S_CAMP_CON) table is also snowflaked between the OLTP Prospects (S_PRSP_CONTACT) table and the Contact (W_PERSON_D) table.

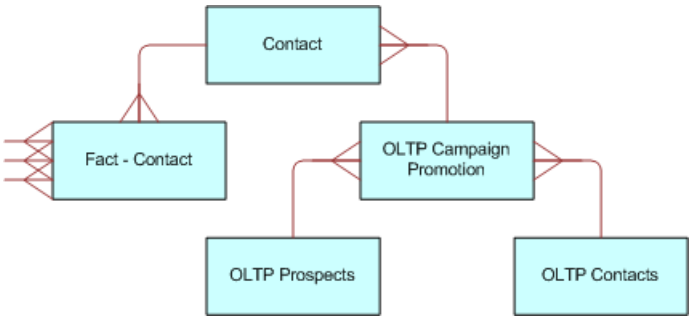


Figure 4. Example of Snowflaked Tables.

Setting Up Cross-Database Joins

If list information needs to be generated from the data warehouse for the contacts in the transactional database Campaign history table (S_CAMP_CON), a cross-database join needs to be created. Oracle BI supports this type of cross-database join.

To set up a cross-database join

1. In the Administration Tool, in the Physical Layer, select the transactional database Campaign History Table and the target level dimension table in the data warehouse.
2. Right-click and choose Physical Diagram, and then Selected objects only.
3. Create a Physical Join using the following syntax:

   <target level dimension>.<unique Id> = *<Siebel transactional database Campaign History Table* S_CAMP_CON>.*<Key 01/02…/07>*

   For more information about which Key column to pick, see Chapter 3, "Designing Marketing List Formats."

Multiple Addresses for Individuals or Accounts

When Individuals or Accounts have many addresses, the addresses are stored in a separate table. However, depending on the channel you use for targeting, email address might be more relevant than postal address.

When a list is generated, an inner join with the address table might result in fewer contacts because some do not have address information. To prevent this from happening, by default the S_Contact table in the transactional database has a left outer join to the address table. A left outer join is used so that contacts with no addresses can be listed. Figure 5 is an example of a logical table source for the S_Contact table.

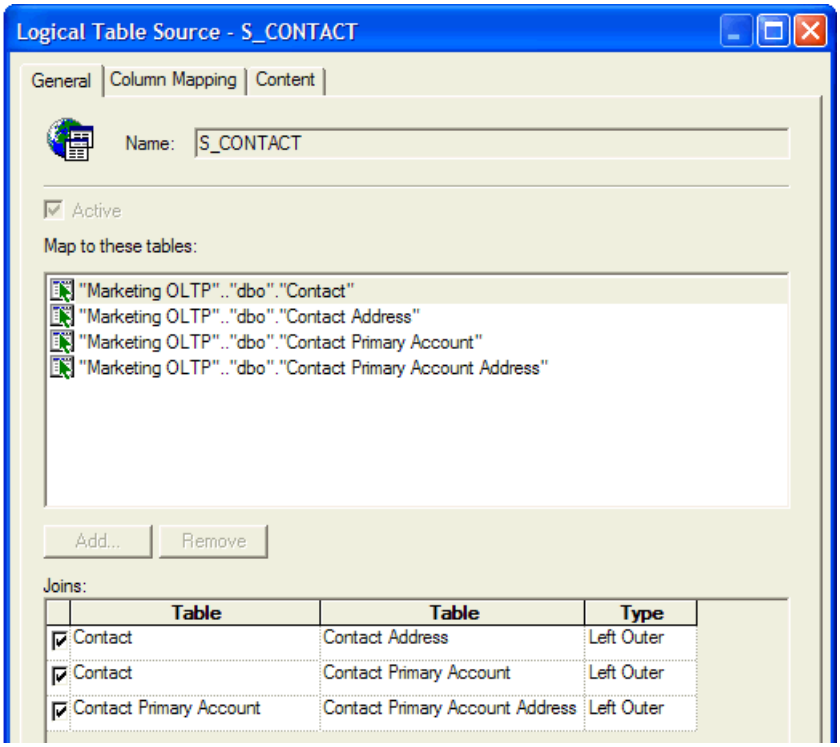


Figure 5. Example of Logical Table Source for S_Contact Table

Setting Up Conforming Dimension Links

Conforming dimensions can be used when a star might include a dimension with the target-level ID. A conforming dimension links a fact that contains target-level IDs to a fact that does not contain target-level IDs by navigating along a dimension that is shared by both fact tables. A conforming dimension path must start from the primary segmentation catalog.

Conforming dimensions can be chained. For example, the data warehouse might have an Offer-Product Star schema. To segment individuals who are offered a particular product, you must set up the following two conforming dimension links:

- A conforming dimension link from the Contact-Account fact to the Targeted Campaign fact in which Contact is the common dimension.
- A conforming dimension link from the Targeted Campaign fact to Offer-Product fact in which Campaign is the common dimension.

The marketing module reads these links and identifies the campaigns that included the products that were offered and then identifies all the contacts that were targeted in those campaigns.

To setup conforming dimension links

1. Open the repository and in the menu bar, click Manage and choose Marketing.
2. In the Marketing Metadata dialog box, in the left pane, click Conforming Dimensions Link.
3. In the right pane, right-click, and choose New Conforming Dimension Link.
4. In the Conforming Dimension Link dialog box, complete the name field.
5. Click the From Catalog ellipsis button to select the From catalog.
6. Click the To Catalog ellipsis button to select the To catalog.
7. Click the Key ellipsis button to select the presentation column that represents the primary key of the dimension that is common to the From Catalog and the To Catalog.

To duplicate a conforming dimension link

1. Open the repository and in the menu bar, click Manage and choose Marketing.
2. In the Marketing Metadata dialog box, in the left pane, click Conforming Dimensions Links.
3. In the right pane, right-click a conforming dimension link and choose Duplicate.
4. In the Conforming Dimension Link dialog box, change the existing values.

   Because one conforming dimension link cannot share the same values as another conforming dimension link, you must select new values. If you do not change the values, an error message appears and you are not able to save the copy.

Conforming Dimensions Example

A bank might track service requests at bank-account level and not the contact level. In this example, there is an intersection fact that identifies the contacts that belong to each account (Contact-Account) and another fact table that tracks the service histories of the service requests on the accounts. The bank needs to perform the following mappings:

- The From catalog is the catalog that is mapped to the Contact-Account fact.
- The To catalog is the catalog mapped to the service request fact.
- The From and To keys mapped to the presentation column for Account-Id in the respective catalogs.

Setting Up Marketing Qualified List Items

A qualified list item is an entity that is evaluated against segment criteria so that the information related to that entity can be exported in a list file. The following are categories of qualified list items:

Sometimes Marketers want to limit the list of attribute values in the list output using segmentation logic. Although this could be accomplished in many ways, some of the simpler aspects of this complex task can be accomplished using the secondary QLI feature.

- **Primary qualified list item.** Used in the segmentation process and the list generation process. To count a target level across segmentation catalogs, the Marketing module needs to know the name of the presentation column in each segmentation catalog that uniquely identifies the target-level ID.

  For example, if the target level is Consumers, the metadata must indicate the database column that contains the Consumer ID in each catalog. When segmenting Consumers, and using a column that contains Consumer-ID information, each catalog might have a different name. The order segmentation catalog might name the column Consumer-ID and the Asset segmentation catalog might name the same column Cons-ID.

  For this reason, you must identify the set of presentation columns across all the segmentation catalogs that refer to the database columns providing the ID for the Marketing Server.

  Every target level needs to have a primary qualified list item. A primary qualified list item is an object that represents the target-level entity (for example, Consumer). The definition of the qualified list item has a set of presentation columns from each segmentation catalog named Qualifying Keys. Within every segmentation catalog for a target level, a presentation column that identifies the target level needs to be associated with the primary qualified list item.

  When the target-level ID is not available in a segmentation catalog, then there is no column associated with the primary qualified list item. This case is handled by specifying conforming dimensions. For more information about conforming dimensions, see"Setting Up Conforming Dimension Links" on page 93. Each target level must designate a primary qualified list item. The primary qualified list item is used to tell Marketing Server which entity to requalify when pulling a list using this target level.

- **Secondary qualified list item.** Primarily used in the list generation process. Use secondary qualified list items to constrain the contents of a list file based on any segmentation criteria that access the underlying dimension for the object.

  For example, you might create a segment targeting customers who have a leased an automobile and the lease expires in the next two months. When generating a list for a direct mail or email campaign, you want to include the customer name and the exact model name of the leased vehicle for which the lease is about to expire.

  Without a secondary qualified list item, the list generation query returns all vehicles owned or leased by segments members. To make sure that, when the list gets generated, only the vehicle whose lease is expiring is listed, the list needs to be additionally qualified based on the vehicle used in the segment. The relevant segmentation catalogs that provide the vehicle information and the list catalogs that provide the list must have an additional list item declared. This list item, called the secondary qualified list item, is the set that refers to Vehicle-IDs across list and segmentation catalogs. Adding a secondary qualified list item, qualifies the list output column to be restricted by the values used in the segmentation logic.

Examples of Setting Up Qualified List Items

The following are some examples of when a secondary QLI might be necessary:

- A B2B marketer creates a segment targeting Account for which there is at least one contact at the VP level, Director Level, and CIO level. When the list output is generated for the campaign fulfillment, the marketer wants only those contacts to appear in the list as were specified using the job titles in the segmentation logic, for example, VP, Director, and CIO. If secondary QLI feature is not used then all the contacts for the segmented Accounts are listed.
- A B2C marketer at an automobile company wants to target customers who have leased a vehicle for which the lease expires soon. When generating the list for campaign fulfillment, the marketer wants to personalize the message to include the type of leased vehicle and the lease that is expiring. The secondary QLI feature limits the list to only those vehicles. If the feature is not used, then all vehicles that are owned or leased are listed.
- A B2C marketer at a financial services company wants to target customers whose portfolio value dropped by more than a specific amount and wants to offer financial consultation. As such the marketer wants to personalize the message by including only the specific portfolio account that was used in the segmentation logic. By using the secondary QLI feature the marketer can limit the list output to only the specific portfolio account and not all the accounts that the customer owns.

Setting Up Qualified List Items

These instructions assume that you have created the business model and the subject areas for the list catalogs.

NOTE: Another technique that achieves the same results as setting up qualified list items is using filters in the List output catalog report in Oracle BI Answers. An advantage of using this alternate technique is that it might be faster and does not require Marketing metadata setup. A disadvantage of using this alternate technique is that too many list format reports might be generated.

1. Open the appropriate repository and from the Manage menu, select Marketing.
2. In the Marketing Metadata dialog box, in the left pane, select Qualified List Item and perform the following steps:
   a. In the right pane, right-click and select New Qualified List Item.
   b. In the Qualified List Item dialog box, in the General tab, type the name of the secondary QLI and click OK.

   NOTE: Generating secondary QLIs can be an expensive database operation. Therefore, secondary QLIs can also be cached. Use the Cache information tab to specify this cache. For every secondary QLI a different cache table needs to be created. These tables must be mapped in a manner similar to other cache tables.
3. In the left pane, select Target Levels.
4. In the right pane, double-click a target level and perform the following steps:
   a. In the Target Level dialog box, click the Segmentation Catalog Tab.
   b. In the Catalog Name list, double-click the name of the presentation catalog that contains the superset of the secondary QLI.

      For example, if Products needs to be qualified, then it is important to know if other products such as Ordered Products or Serviced Products need to be qualified.

c In the Segmentation Catalog dialog box, click Add.

d In the Qualifying Key dialog box, in the Qualified List Item field, click Browse and select the QLI that you created in Step 2 on page 96.

e In the Qualifying Key dialog box, in the Column field, specify the presentation column such as Product ID that provide the QLI information and click OK three times.

5 In the Marketing Metadata dialog box, in the left pane, select List Catalog and perform the following steps:

a In the right pane, right-click and add the presentation catalogs to participate in list generation.

b For each list catalog used for a secondary QLI, double-click the list catalog and add the secondary QLI that you created.

c Click OK.

6 In the Marketing Metadata dialog box, from the Action menu, select Check Marketing Metadata Consistency.

If you modified the repository online, check-in your changes, save, Check Global consistency and exit.

7 Test the QLI function by using the Marketing module user interface features.

Controlling Marketing Vendor List Query Details

If there are dimensional attributes in your list output report that do not belong to the target level dimension and there is a 1:N relationship between the target level and the Dimensional attribute, special configuration might be needed. For example, if the list output report contains columns such as Contact-ID (target level) and email Address and there is a 1:N relationship between Contacts and Email Addresses, the list output report is similar to Table 10.

Table 10. Example of List Output Report

Contact-ID	Email Address
C1	E1@A1.com
C1	E2@A2.com
C1	E3@A3.com

However, marketing vendor lists often require that only one row be created for every Contact (target level ID). This problem can be solved in the following ways:

- Adding an explicit filter such that only one email address is selected in the list output, such as in the following example:

  `WHERE <Email-Address Table>.<Type Column> = Primary`

- Using a QLI on the Email-Address column. For more information, see "Setting Up Marketing Qualified List Items" on page 94.

- Setting up a simple measure and adding a filter.

  For example, set up a simple measure such as RANK (Email-Address) by Contact-ID, and then assign a filter to this measure in the report as WHERE RANK(E...) = 1. This generates a unique number, starting from 1, for every combination of the Contact-ID and E-mail Address columns. The filter selects the first combination, eliminating duplicate rows. The following are the guidelines for setting up a simple measure and adding a filter.

  - In the Administration Tool, select the business model for the list output for the target level (for example, Contact).
  - Create a logical fact table and a logical column.
  - In the Levels tab, select the Detail level for the target level dimension.
  - Drag this measure to the List catalog in the Presentation layer, check metadata consistency, and save your work.
  - In the Marketing Module, in the List Format Designer, add this column, put a filter equal to 1 and remove the column from the list format.

5 Using Marketing Segments and Segment Trees

This chapter describes how to develop target segments for marketing campaigns. It includes the following topics:

- About the Segment Designer on page 99
- About Segment Tree Designer on page 112
- Creating and Editing Segment Trees on page 113
- About Prompted Segmentation on page 123
- This section describes the following topics: on page 125

About the Segment Designer

From the segmentation home pages, you can perform the following tasks:

- **Create a segment.** A segment defines a target set of customers or prospects. In most cases, the members of a segment change over time because the criteria is reevaluated against the most current data in your database.
- **Create a segment tree.** Use a segment tree to select one or more segments and split the segment members into smaller groups (or target cells).
- **Create a List format.** List Formats define the layout of files that you can use for purposes such as mailing to postal addresses or email addresses.
- **Manage marketing jobs.** The Manage Marketing Jobs link on the segmentation home pages displays your jobs and cache entries. The administrator can display job and cache entries for each user. For more information about managing marketing jobs, see Managing Marketing Jobs on page 16.

Using the Segment Designer, you can determine how many prospects or customers qualify for certain criteria. Each Segment is created by adding a sequence of successive criteria blocks to refine the segment membership. With each additional criteria block that you add, the membership can either increase or decrease depending on whether the criteria excluded or added members. To create a new segment, you can click the new icon or open a saved segment, modify it, and save it with a new name.

Each segment is based on a target level that indicates the type of customer you plan to count and target for your campaigns. For example, target levels may include companies, individuals, or households.

For each target level there is a set of relevant subject areas that contain the information about that target level. These subject areas organize available facts and attributes into common topics such as Campaign History, Orders, Products Owned, or Service History.

From the start page for the Segment Designer, you can do the following:

- Open a Saved Segment. To open an existing segment, drill down on the segment folders in the left column.
- Create a New Segment. To create a new segment, select a target level from the Select Target Levels popup.
- Manage Marketing Jobs. To view the status of jobs that are processed by the server, click the link.

For additional information, see the following topics:

- Frequently Used Terms for Marketing Segmentation on page 100
- Managing the Catalog on page 102
- Refreshing the Display on page 103
- Reloading Server Metadata on page 103
- Creating Segments in Segment Designer on page 103
- Adding Criteria Blocks to Segments on page 104
- Saving Result Sets for Marketing Segments on page 109
- Segment Advanced Options on page 111

Frequently Used Terms for Marketing Segmentation

Table 11 defines frequently used segment and segment tree terms.

Table 11. Frequently Used Terms for Marketing Segmentation

Term	Description
Criteria Block	Building block of a segment. With each additional criteria block that you add, the segment membership can either increase or decrease.
Cumulative Count	A type of count calculated by the Segment Designer. The cumulative count represents the total number of segment members that qualify for the indicated criteria block as well as the criteria blocks above it. As you add an additional criteria block at the bottom of the stack, the cumulative count either increases or decreases depending on whether you add, keep, or exclude segment members from the previous result.
Deduplication	Calculation that removes overlapping members of a segment tree branch. Overlapping members are members of one branch that also qualify for any higher priority branch.
Eligible Audience	A set of criteria that constrain the members of a segment tree. The eligible audience appears in the top section of the segment tree. The Eligible Audience criteria are defined by selecting a segment with the criteria and then adding the segment to the Eligible Audience section of the Segment Tree. For example, you may have an eligible audience that excludes inactive customers or only selects customers in your geographic region.

Table 11. Frequently Used Terms for Marketing Segmentation

Term	Description
Global Audience	A default eligible audience set by an administrator to apply to every segment and segment tree.
Gross Count	In a segment, gross count represents the total number of members that qualify for a specific criteria block, independent of any other criteria block in the segment design. This value tells you how many segment members would be selected if the specific criteria block was the only criterion in your segment. In a segment tree, the gross count represents the total number of members that qualify for a tree branch, taking into account the full set of criteria in the parent branches.
Groups	A group is a combined set of criteria blocks that evaluate together. A group is like a pair of parentheses in an equation, so that the qualifying members for the group are determined before adding or removing the group members from the cumulative segment membership.
List format	Define the layout of files that you can export for a variety of purposes such as importing targeted customers into a campaign, building a customer email list, or generating a list for execution by a third-party vendor.
Nested Segment	A segment that is embedded within another segment definition. When a nested segment is used, its corresponding counts apply the criteria for the nested segment and then add, keep, or exclude the qualifying customers to the cumulative count for the main segment.
Net Count	A type of count computed by the Segment Tree Designer. The net count represents the number of members that qualify for a target cell in the segment tree. The net count displays how many members qualify based on the splitting and sampling criteria. Net count displays the members after deduplication.
Not Included Count	A type of count computed by the Segment Tree Designer. The Not Included Count represents the number of members that were removed from a tree branch because they also qualified for any higher priority cell.
Priority	Each target cell has an assigned priority number, which is used to apply deduplication when some members qualify for more than one target cell. Priority must be an integer value of 1 or higher and no two cells can share the same priority. The smallest value in the tree (usually 1) is the top priority. You can click the auto-prioritization icon to update the priority of all tree nodes sequentially in ascending order, for example 1 to 10 for 10 priority nodes.
Saved Result Set	A fixed set of segment members that are recorded at a particular point in time. They are saved in the database so that they can be reused in the future without reevaluating the criteria again.

Table 11. Frequently Used Terms for Marketing Segmentation

Term	Description
Segment	A target set of customers or prospects that qualify for a set of criteria. In most cases, the exact members of a segment changes over time because the criteria are reevaluated against the most current data in your database. However, using saved result sets, you can also save a segment as a static set of customers that were recorded at a particular point in time.
Segment Tree	Use to select one or more segments and split the segment members into smaller groups (or target cells). As you split a segment into smaller groups, the groups are displayed in a tree diagram. As in segments, segment trees can save a static set of customers derived from any target cell.
Splitting and Sampling	The action you take to break a segment or segment tree branch into smaller groups.
Subject Area	A set of facts and dimensions that are organized by a common topic, such as Orders, Products Owned, Service History, or Campaign History. Within each subject area, you can choose any fact or dimensional attribute to create a criteria for your segment.
Target Cells	An end point branch of a segment tree, meaning that the branch does not have any child branches. Target Cells are the only branches that can be associated with a marketing campaign. Target Cells have an assigned priority number, and you can use deduplication to deduplicate members that qualify for more than one target cell.
Target Level	Indicates what type of customer are counted in the segment membership and included in associated campaigns. For example, target levels may include target levels, companies, individuals, or households. The gross and cumulative counts for a segment are counted based at the selected target level. In most situations, target levels represent some type of customer, such as an individual or company. However, target levels can also be created by your administrator to create more advanced segment definitions. For example, advanced target levels can include Assets or Products that a customer owns.
Web Catalog	The Oracle BI Presentation Catalog stores content created with the Segment Designer, Segment Tree Designer, and List Format designer. Content can be organized into folders, which are either shared or private. Types of content that can be stored in the Web Catalog include segments, segment trees, list formats, as well as reports, filters, and dashboards created with Oracle BI Answers.

Managing the Catalog

Use the Manage Catalog feature to edit, rename, set permissions for, and delete folders and items in the Oracle BI Presentation Catalog. To manage the catalog, click the Manage Catalog link in the Segments or Segment Trees column.

For more information on managing the catalog, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition* or access the online help from the Manage Catalog window.

Refreshing the Display

The Segments column and Segment Trees column is populated when you first access the Segments or Segment Tree Designers. New folders, segments, and segment trees added by other users during your session do not automatically appear in your session. To keep your display current so you can access any new items, click Refresh Display at the bottom of the column.

Reloading Server Metadata

When creating a segment you use columns that are created in Oracle BI. The list of columns available to you is populated when you start the Segment Designer, and is not automatically updated during your session. To update the list of columns, click Reload Server Metadata at the bottom of the Segments column.

Creating Segments in Segment Designer

The Segment Designer applies criteria blocks in a top-down sequence so that each criteria block that you add refines the segment membership of the criteria immediately above it. As you add criteria vertically down the screen, the Cumulative Count keeps track of how many customers have qualified for that criteria and those above it. At the bottom of the view, the total count of qualifying segment members appears with the criteria applied.

NOTE: The Segment Designer computes two types of counts, gross count and cumulative count. For descriptions, see "Frequently Used Terms for Marketing Segmentation" on page 100.

For special situations where you need to create a group of criteria blocks (similar to parentheses in an equation), you can drag one criteria block on top of another to create a group. This method applies a combined set of criteria as a single constraint on the main segment membership.

The Segment Designer can include a reference to another existing segment (referred to as a nested segment) within the segment you are building.

After you create a segment, you can save it in one of the folders in the Web Catalog. You can also choose to download the segment structure with counts to an Excel spreadsheet by clicking Download.

To create a new nested segment based on a different target level, click the Select Another Target Level button. This action saves the current segment. You can then build a nested segment and return to the main segment when you are finished.

NOTE: The subject areas that you can display are dependent on the security settings specified for you by your site's administrator.

About Using the Marketing Segment Panel to Add Criteria to Segments

Use the segment pane to add criteria blocks when creating new or changing existing segments. To create a new segment, you can click the new icon or open a saved segment, modify it, and save it with a new name. Using either method, you select the subject area and field to use for a segment criteria. The panel displays the subject areas that are relevant for the target level for your segment.

You can also add a nested segment to your segment by selecting a folder displayed in the bottom of panel and clicking the segment name.

Adding Criteria Blocks to Segments

Each criteria block denotes a set of criteria that are evaluated together. This means that any segment member that qualifies for the criteria block must meet the criteria displayed within the block.

For example, if a segment has the following criteria block:

```
Product purchased is a blue hat
AND
Purchase date is December 31, 2004
```

This segment finds the customers who purchased a blue hat on December 31, 2004. Because the criteria are in the same block, the criteria are applied to the lowest level dimension related to the criteria, which in this case, is Purchases (record-level evaluation).

If your segment places criteria into separate criteria blocks, each criteria block finds segment members that satisfy each criteria block. After segment members have been identified, the segment designer determines how many segment members qualified for both criteria blocks.

NOTE: If your administrator sets up a dashboard so you can display the contacts that qualify, you can display this dashboard by clicking the final segment count (at the bottom of the screen).

For example, you may have a segment with the two criteria blocks shown in the following list:

Start With	Criteria block 1: Product purchased is a blue hat.
Keep	Criteria block 2: Purchase date is December 31, 2004.

In this example, the relationship between the criteria are evaluated at the customer level, rather than the purchase level (record level). This segment would find the customers who purchased a blue hat at any time and customers who purchased any product on December 31, 2004. For example, the segment includes customers who purchased a blue hat in February and purchased a black coat on December 31, 2004.

To select a field to add as a criteria block

1. Click a subject area near the top of the selection pane and then expand the subfolders to display the available facts and dimensions.
2. Click the fact or dimension to use.

3 In the New Filter dialog box, add the filter criteria, and click OK.

For more information about using column filters, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

To set properties for a criteria block

1 In a criteria block, click Properties.

2 In the Properties dialog box, make changes to any of the following options:

- In the Label field, enter a custom caption for your criteria.
- Cache the block for future update counts requests.

  Select this option to temporarily cache the results for that criteria block. This option saves time when refreshing counts while designing a segment. When a block is cached, updating counts refreshes the cache when the cache is expired or does not exist. By default, the segment designer does not cache any blocks unless you explicitly check this box.

3 Click OK.

To add filters to a criteria block

1 In a criteria block, click the filter button.

2 In the New Filter dialog box, add the filter criteria.

For more information on using column filters, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.

3 When you are finished adding filters for the criteria block, click OK.

To add a filter using an aggregate field

1 Create a new criteria block or click the filter button on an existing block.

2 Select the aggregate field such as Order Revenue from the selection pane.

3 To group by another field, in the Create/Edit filter dialog box, click Add Aggregate By.

4 While the Add Aggregate By dialog box is open, in the selection pane, click a field to group the results by.

To embed a nested segment in your segment design

1 Click the My Segments or Shared Segments folder at the bottom of the selection pane.

2 Click a segment to add as a nested segment.

To save a new segment

1 Click the save icon in the upper-right corner of the screen.

2 Select a folder location where the segment is to be saved.

3 Enter a segment name, and click OK.

To save changes to a segment

1 Click the save icon in the upper-right corner of the screen and click OK.

2 In the Save dialog box, click Yes to confirm replacing the previous version.

To generate lists

1 Save the segment.

2 Click Generate Lists.

NOTE: To generate lists, the List Preview file should be associated with the saved segment in the Advanced Options tab. When you click Generate Lists, a pop-up is displayed with contains the Generate List Files and Generate Preview buttons.

To view the cumulative counts within a criteria block

1 Click the filter button on the criteria block.

2 In the Edit Criteria Block dialog box, click Get Counts.

3 The cumulative counts for each criterion in the criteria block appears.

NOTE: The starting count for the selected block is based on the cumulative count for the criteria block above your selected block.

4 When you are finished viewing the counts, click Back to Editing, and click OK.

To update counts in a segment

1 In the upper-right of the Edit Segment tab, click Update Counts.

2 In the Update Counts dialog box, select a refresh option.

3 If you are using the Cache option, you can also select Refresh MarketingCache.

Selecting Refresh Marketing Cache guarantees that you query against the most current data.

4 Click OK.

Adding Selection Rules

Selection Rules control the items related to the segment that are included in the campaign load and list export processes. For example, for a segment of accounts (companies), you can control which employee or employees at the company you want to target.

A selection rule consists of several parts:

- **Inclusion and Exclusion criteria.** Apply one or more criteria to indicate what items are to be included in and excluded from the segment.
- **Ranking rule.** If there are multiple items related to each segment member, use the ranking rule to indicate how the items must be ranked. For example, if there are multiple employees for an account, indicate what field you want to use to rank the employees before selecting a subset.
- **Record count selector.** Indicate whether you want to select one or more items for each segment member (the Target Level). For example, you can indicate how many employees from a single company are targeted.

You can apply selection rules for more than one qualified item if desired. For example, you may have a segment targeted at households that own a variety of financial assets (bank account, insurance policy, or mortgage). You could use a selection rule for individuals to control which member of the household to which to communicate and a second selection rule on assets that controls which assets to mention in the text of a personalized letter.

NOTE: Selection rules for any nested segments within another segment definition are ignored. Only selection rules for the top-level segment are applied.

To create a selection rule

1. Click on Add Selection Rule.
2. Select the type of Qualified Item to constrain or select.
3. In the Create/Edit Filter dialog box, add the filter criteria.

   For more information on using column filters, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*. Alternatively, you can filter the item with a previously saved segment by clicking the segment from the left panel.
4. Click OK.
5. In the criteria block, select Include/Exclude to include or exclude these types of items from the results.
6. For additional constraints, repeat Step 5.
7. In the bottom section of the rule, use the option buttons to select whether all items qualify or only specific items.

   For more information on selecting specific items, see "To add a ranking rule to a selection rule."

To add constraints to a selection rule

1. Click on Add Another Constraint.
2. In the Add Constraint dialog box, add the filter criteria.
3. For more information on using column filters, see *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*.
4. Click OK.

5 In the criteria block, select the Include/Exclude link to include or exclude these types of items from the results.

To add a ranking rule to a selection rule

1 In the area beneath the constraint criteria boxes, select the option button for a limited number of items (for example, 1 Contact only).

The Add Ranking Field link appears.

2 Select the link.

3 In the dialog box, select a field from the left selection pane to use for the ranking, and then click OK.

4 In the drop-down list choose either Maximum or Minimum for selecting items in the ranking field.

NOTE: Date fields treat older dates as Minimum and newer dates as Maximum.

5 To modify the formula for the ranking field or add a Case statement, click the Edit Formula icon.

For more information, see "To modify the formula for the Ranking Field".

NOTE: Ranking fields are available from any subject area that relates to both the Qualified Item and the main segment's primary Qualified Item (the Target Level).

To modify the formula for the Ranking Field

1 In the Ranking line for the Selection Rule, click the Edit Formula icon.

2 In the dialog box, click the Column Formula tab.

3 To display a glossary of available expressions, click the help link.

4 To convert the values for a field using a Case statement, click the Bins tab.

5 To create a bin for a condition, click Add Bin.

NOTE: By default, bin values are treated alphabetically. In the Bins tab, you may need to treat the resulting values as numeric values (to use numeric sorting). For example, if you used Bins to convert the Net Worth field to Values 1,2,3...10, you would want to rank numerically to make sure that '10' was after '9'. To enable numeric ranking, click the check box for 'Treat result as a numeric value or expression'.

6 When done editing, click OK.

As a shortcut, you can add a criteria block from the Edit Segment view directly as a Selection Rule constraint. You can only reuse criteria blocks from the top level of the segment criteria and blocks that use Keep and Exclude operators.

To reuse criteria from the Edit Segment view as a selection rule constraint

1 Click the Edit Segment tab.

2 Locate the criteria block to which to add selection rules and click its view icon.

The Properties dialog box appears.

3 Check the box for the Qualified Item to constrain.

4 Click OK.

5 Click the Selection Rules tab.

The constraint has been added to the selection rule for the item you checked.

Saving Result Sets for Marketing Segments

A Saved Result Set is a fixed set of segment members that are recorded at a particular point in time. They are saved in the database so that they can be reused in the future without evaluating the criteria again.

Saved Result Sets can be useful in the following situations:

- When you want to freeze the members of a segment at a specific point in time, so that the membership does not change.
- When you have a very complex segment and you want to store the members of a recently counted segment to save query time.
- When you want to save a branch of a segment tree as a separate segment.

Requirements for Saving Result Sets

Before you can save a result set, you must create a result set list format and specify that list format in the Advanced Options. For more information on creating a result set list format, see “Defining Saved Result Set Formats” on page 51. For more information on specifying which list format to use for your segment, see “Segment Advanced Options” on page 111.

To save a result set for a Marketing segment

1 In the Segment Designer, open the segment.

2 Click the Saved Result Sets tab.

3 Click the Save Result Set button.

4 In the Save As dialog box, verify the segment name and location.

5 Click OK to submit the job.

6 To cancel the job, click the Cancel/Exit links.

After the request is complete, the newly created saved result set appears.

To use a segment saved result set as a nested segment

1 In the Segment Designer, open a segment to edit.

2 Find a different saved segment in the Segment Folders in the selection pane and click it to add it to the segment design.

3 Click the properties button on the nested segment block.

4 Select Use Saved Result Set.

5 In the Saved Result Sets dialog box, select one of the following:

- Always use most recent Saved Result Set
- Choose a specific result set from the list.

6 Click OK to close the Saved Results Set dialog box.

7 Click OK to close the Properties dialog box.

8 Save your changes.

To set a segment to always use a Saved Result Set

1 In the Segment Designer, open the segment.

2 Click the Advanced Options tab.

3 Select the following check box, and then click OK:

Always use most recent saved result set

NOTE: When you use this segment, the most recent result set determines the segment membership.

To purge a saved result set

1 Click the Saved Result Sets tab.

2 Select a results set and check its box.

3 Click Purge.

Results sets for branches are listed twice: one time as part of the tree and one time as a static segment. Purging one instance purges both.

To analyze Marketing XML for marketing objects

1 Click the Marketing XML tab.

From here, you can analyze the XML for marketing objects such as segment, segment tree, and list format.

2 Select Get XML and edit the XML code as appropriate.

3 Click Set XML to save your changes.

Segment Advanced Options

Table 12 shows the options available in the Advanced Options tab for a segment.

Table 12. Segment Advanced Options

Control Name	Description
Enable this Segment for Event Triggered Campaign	Creates a set of prompted filters at the most optimized locations, based on segment criteria. For more information on prompted segmentation, see "About Prompted Segmentation" on page 123.
Display Prompted Nodes for this Segment	Displays prompted nodes in segments. Deselect this check box to make long segments more legible.
Cache final segment result set for list output	When generating multiple lists based on the same segment, you can cache the final set of customers during the first list usage so that subsequent list uses can access those results for faster processing.
Always use most recent Saved Result Set	When you use the segment, the most recent result set determines the segment membership.
Default to cache criteria blocks for future jobs	Controls the default value of the check box named Cache this block for future jobs.
Campaign Load File format	The campaign load file format used for loading the members of the segment tree into each campaign. The campaign load file format controls what information about the segment members is loaded into the campaign history in the transactional database. This information may include name, address, and email address. When you first create a segment, the Campaign Load file format is set based on the default setting for the target level. You can select a different file format, if required. If you are not certain about the effect of changing the file format, contact your administrator. For more information on list formats, see "Designing Marketing List Formats" on page 40.
List Preview File Format	The file that specified the format used for previewing lists. For more information on list formats, see "Designing Marketing List Formats" on page 40.
Saved Result Set File Format	The file that specified the format used for saved results sets. For more information on list formats, see "Designing Marketing List Formats" on page 40.
Segment Extension Attributes	For more information, see the topic "Segment Extension Attributes" on page 112.

Table 12. Segment Advanced Options

Control Name	Description
Delete List Cache (button)	Clicking this button submits a job to purge the cache entries associated with pulling a list requalified by any of the target cells in this segment. You would click this button prior to pulling a list to make sure that the list contains the most recent customers in the target cell.
Marketing XML	Click the Marketing XML tab to display an XML-based UI debug tool. Use this tool to analyze the generated XML for Marketing objects such as segment, segment tree and list format.

Segment Extension Attributes

Segment Extension Attributes are additional columns you add to a segment or a segment tree node. These attributes do not affect the segment counts. Instead, they are used to provide a means of storing additional data for each customer in a segment. This additional data can be used in list generation and in third party tools for further analysis. Your administrator creates the list of columns available for use as extension attributes.

Example: You add two extension attributes to a segment. One extension attribute is a column that contains the source of a new lead (trade show, internet web page visit, cold call) and the other column contains the product the lead is interested in. Based on the source and product information, you can track the resulting sales to see if lead source affects product sales.

To add an extension attribute

1. In the Advanced Options tab, click Add Attribute.

   The Segment Extension Attributes window appears.

2. Select an attribute.

   The new attribute appears in the Advanced Option tab's Segment Extension Attributes list.

3. In the Value column, enter an alphanumeric value.

About Segment Tree Designer

Using the Segment Tree Designer, you can create a new segment tree or open a saved segment tree by selecting it in the selection pane, making changes, and saving the tree under the same or a new name. After you create a segment tree, you can save it in one of the folders in the Web Catalog in the selection pane. To obtain descriptions for frequently used terms, see "Frequently Used Terms for Marketing Segmentation" on page 100.

The Segment Tree Designer has links to additional Help information on each screen. When you need more information, click the Help link in the dialog box or the small help icon next to the item.

Creating and Editing Segment Trees

The Segment Tree Designer creates and edits segment trees. You can select one or more segments and split the members into smaller groups (or target cells). As you split a segment into smaller groups, the groups are displayed in a tree diagram, and the resulting branch is always the same size or smaller than the parent branch.

Use the Split/Sample option to split any segment or tree branch into smaller groups. You can select from a set of splitting and sampling methods, including Random selection, Nth selection, Ranked, N-tiles, and Values.

NOTE: For more information about adding a filter using an aggregate field, see "Adding Criteria Blocks to Segments" on page 104.

Each segment tree is based on a target level, which indicates what type of customer you plan to count in the tree. For example, target levels can include target levels, companies, individuals, or households. When deduplication is enforced between target cells in the tree, the deduplication is applied at the target level. For example, if the target level for the tree is Companies, then deduplication makes sure that each company is a member of only one cell.

As you split and sample from the tree branches, some of the branches are end point branches, which means that they do not have any child splits. These end points are referred to as *Target Cells,* because they are the distinct groups targeted in a marketing program. Each Target Cell displays a priority number. The priority is used to apply deduplication between cells that may contain some of the same members. You can click the auto-prioritization icon to update the priority of all tree nodes sequentially in ascending order, for example, 1 to 10 for 10 priority nodes.

The Segment Tree Designer displays several types of counts such as net counts and gross counts. For descriptions, see "Frequently Used Terms for Marketing Segmentation" on page 100.

Members of the Segment Tree are constrained by the eligible audience. The eligible audience is a set of criteria that appear in the top section of the screen. The criteria are applied to the Eligible Audience by creating a segment with the criteria and then adding the segment to the Eligible Audience section of the Segment Tree. For example, you may have an eligible audience that excludes inactive customers or only selects customers in your geographic region. Optionally, your administrator can also designate a Global Audience, which is a set of criteria that applies to the segment trees and cannot be removed by other users.

After you create a segment tree, you can save it in one of the folders in the Web Catalog.

The Segment Tree Designer has links to additional Help information on each screen. When you need more information, click the Help link in the dialog box or the small help icon next to the item.

This topic contains the following information:

- Creating a Segment Tree in Segment Tree Designer on page 114
- About Segment Tree Branch Properties on page 115
- Adding Selection Rules to a Segment Tree on page 116
- Splitting Segments or Branches on page 118
- Constraining List Data for a Segment Tree on page 120
- Adding or Removing Constraints to the Eligible Audience on page 121

Creating a Segment Tree in Segment Tree Designer

Use the segment tree selection pane to create a new segment tree, select the segments to sample in the tree, and select the fields to use for the splitting criteria. After you create a segment tree, you can save it in one of the folders in the Web Catalog. You can also choose to download the segment structure with counts to an Excel spreadsheet by clicking Download.

When you begin editing a tree, the selection pane displays the available segments that you can use in the tree. To add a segment to the segment tree, open its folder in the selection pane, and click the segment name.

As you add splitting and sampling criteria, the selection pane changes to display the available subject areas and fields for the target level on which the tree is based.

NOTE: The subject areas that you can display depend on the security settings specified for you by your site's Administrator.

To create a new segment tree

1. In the Segment Tree Designer, select a Target Level.
2. In the selection pane, click the names of the segments to add.
3. To save the segment tree, click the save icon in the upper-right corner of the screen.
4. Select the folder location where the segment tree is to be saved.
5. Enter a segment tree name and click OK.

To add a segment to a segment tree

1. In the Segment Tree Designer, select the Edit Segment tab.
2. Click the folder in the selection pane to display the segments.
3. Click the segment name in the selection pane.

   This adds the segment to the bottom of the segment tree.
4. Click the save icon in the upper-right corner of the screen and click OK.
5. Click Yes in the dialog box to confirm saving over the previous version.

To generate lists for a node

1. Save the segment tree.
2. Select a node.
3. Click the node's menu button and choose Generate Lists.

To update counts in a segment tree

1. In the upper-right of the Edit Segment Tree tab, click Update Counts.

   The Update Counts window opens.

2. In the Update Counts dialog box, click the Count Options tab.
3. Indicate which criteria blocks to update:
   - New and changed criteria blocks
   - Selected criteria blocks
   - All criteria blocks
4. If you are using the Cache option, you can also select Refresh MarketingCache.

   Selecting Refresh Marketing Cache guarantees that you query against the most current data.
5. Click the Count Type tab.
6. Select the counts to be updated—making sure to select at least one type of count—and then click OK.

To save the results set for an entire segment tree

1. In the Segment Tree Designer, click the Saved Result Sets tab.
2. Click Save Result Set to create a Saved Result Set for every node.
3. In the Save As dialog box, verify the segment name and location.
4. Click OK.
5. When prompted, enter a custom label for the segment tree.

   Marketing creates a static segment for each tree node. The naming format is:
   <Custom Label>-<Node Label>-<Priority>
6. While saving a result set for a particular tree node, you have the option of either append to an already created static segment (useful for doing analysis over time) or creating a new static segment.

About Segment Tree Branch Properties

Table 13 shows the options available in the properties dialog box for a segment tree branch.

Table 13. Segment Tree Branch Properties

Control Name	Description
Label	Used to add a custom label for the branch. **NOTE:** Custom labels cannot be entered for embedded segment nodes.
Include Remainder with child cells (check box)	When selected, adds a remainder group when you split or sample the branch.
Include overlapping members from higher priority cells	When selected, disables deduplication for this cell.

Table 13. Segment Tree Branch Properties

Control Name	Description
Cache this block for future Jobs	Select this option for the following reasons: ■ When selected, this option temporarily caches the members who qualified for that branch, which saves time when refreshing counts while designing a segment tree. ■ When a split-by-value node is marked for caching and constrains a secondary list attribute, this attribute is also cached. ■ The segment tree designer caches the tree nodes by default.
Anticipated response rate for statistical significance test	Use this to add the assumed response rate for that cell.
Save Result Set (button)	Saves the list of members that qualify for the branch based on the most recent updated counts. When you click this button, you are prompted for a new segment name. The customers in the target cell are extracted and saved to the new segment. **NOTE:** The saved segment does not include any of the original criteria, it includes only the stored list of members.
Path	This displays the Web catalog path of the segment to which an embedded segment node refers.
Use Saved Result Set	When selected for an embedded segment node, you can select the following options: ■ Always use most recent Saved Result Set. ■ Choose a specific result set from the list.

Adding Selection Rules to a Segment Tree

Selection Rules control the items related to the segment tree cells that are included in the campaign load and list export processes. For example, for a segment tree of accounts (companies), you can control which employee or employees at the company you want to target.

For a Segment Tree, you have several options to apply the Selection Rules:

- **Selection Rules tab.** Use this tab to enter explicit Selection Rules that apply to all cells on the Segment Tree.
- **Inherit Selection Rules from the segments.** This option inherits any existing selection rules from the segment or segments included in the segment tree.
- **Apply constraints from the Segment Tree splitting and sampling criteria.** Use this option to selectively apply the criteria for specific tree branches as part of the selection rule.

For information on creating selection rules, see “Adding Selection Rules” on page 106.

Rather than create Selection Rules for the entire segment tree, you can inherit the Selection Rules from each segment.

To inherit selection rules from a segment

1. Click the view icon for the segment in the tree.
2. Click Properties.

   The Properties dialog box appears.
3. Check the box for Inherit Selection Rules from the segment and then click OK.

NOTE: The inherited rules do not appear in the Selection Rules view. This occurs because the criteria may vary between different segments in the tree, while the Selection Rules view shows only criteria that apply to all cells in the tree. You can only inherit selection rules from segments with the same target level as the tree.

As a shortcut, you can add the splitting and sampling criteria from the Edit Segment Tree view directly as a Selection Rule constraint.

To reuse criteria from the Edit Segment Tree view as a selection rule constraint

1. Click the Edit Segment Tree tab.
2. Locate the split block to be added to the selection rules and click its icon.

   The Properties dialog box appears.
3. Check the box for the Qualified Item to constrain, and then click OK.

NOTE: These constraints do not appear in the Selection Rules view. This occurs because the criteria may vary between different tree branches, while the Selection Rules view only shows criteria that apply to all cells in the tree.

Splitting Segments or Branches

Use the Split/Sample option to split any segment or tree branch into smaller groups. As you split or sample, the resulting branch is always the same size or smaller than the parent branch. Table 14 shows the available sampling methods.

Table 14. Sampling Methods for Splitting Segments

Sampling Method	Description
Random selection	The Random method selects a purely random subset of members based on the percentage or count you add for this method. For random selection, you are not required to select a field.
Nth selection	The Nth method splits the branch into N number of equally sized groups. The selection is based on the sequence with which the records are returned from the database. For example, if you select N = 4, the branch would be split into 4 equally sized groups representing 25% of the original group. For this method, you are not required to select a field.
Ranked	The Ranked method sorts the members of the branch by a field you select and lets you choose the top or bottom portion of the ranked list. For example, if you Rank by Total Customer Revenue, you can select the top 10% of the customers with the highest revenue.
N-tiles	The N-tile method sorts the members by a field you select and then splits the list into equal sized groups. For example, you may create quartets or deciles based on Total Customer Revenue.
Values	Similar to instructions for creating filters in segment criteria blocks. For more information about adding a filter using an aggregate field, see “Adding Criteria Blocks to Segments” on page 104.

Mixing Random Splits with Other Splits

You can create segments that mix random splits with other splits. However, this affects how targets are assigned to each split. Random splits exclude targets only when those targets are in immediately adjacent random spits. This point is best illustrated by some examples.

Example A: Three Random Splits

1 - Random Split 10%
2 - Random Split 20% (This split excludes targets that are in split 1.)
3 - Random Split 30% (This split excludes targets that are in splits 1 and 2.)
Effect: All three splits contain different targets, no target exists in more than one split.

Example B: Mixed Random and Nth Splits with Possible Recurrence of Targets

1 - Random Split 10%
2 - Nth Split [N=10]
3 - Random Split 20% (This split does not exclude any targets.)
4 - Random Split 30% (This split excludes targets that are in split 3, but does not exclude targets that are in other splits.)
Effect: Because Split 4, a random split, follows another random split, it does not contain any targets that are in split 3. Because there is a nonrandom split after split 1, targets from split 1 could appear in splits 3 and 4.

Example C: Mixed Random and Nth Splits with No Recurrence of Targets in Random Split

1- Nth Split [N=10]
2- Random Split 10%
3- Random Split 20% (This split excludes targets that are in split 2.)
4- Random Split 30% (This split excludes targets that are in splits 2 and 3.)
Effect: Because the random splits are adjacent to each other, splits 3 and 4 exclude any targets that are in previously adjacent random splits. However, targets in split 1, an Nth split, may recur in any of the random splits.

When random split cells are separated, they are evaluated independently and do not stay mutually exclusive.

To select a field for splitting or sampling criteria

1. Click the action button for a tree branch to split or sample.
2. In the menu, choose Split/Sample.
3. In the Apply Split/Sample dialog box, select a sampling method to use.

   NOTE: The contents of the dialog box changes when you select different sampling methods.

   The available subject areas and fields appear in the selection pane. The list of subject areas is based on the target level for the segment tree.
4. In the revised Apply Split/Sample dialog box, complete the fields.
5. Click the subject area that contains the desired field.
6. Click the folders to expand the subject area.
7. Click the field name.

To create random samples

1. Enter the number of groups to create (1 to N).
2. Select whether to define the group sizes by Percentage or Count.
3. Enter a percentage or count for each group, and click OK.

   The sum of the percentages cannot exceed 100%.

To create Nth samples

1. Enter the number of groups to create (N).
2. Click OK.

To create ranked samples

1. Select the field to rank by from a subject area in the selection pane.
2. Enter the number of groups to create (1 to N).
3. Select whether to define the group sizes by Percentage or Count.
4. Enter a percentage or count for each group, and click OK.

   The sum of the percentages cannot exceed 100%.

To create N-tile samples

1. Select the field to use for the N-tile from a subject area in the selection pane.
2. Enter the number of groups to create (1 to N).
3. Select whether the top group has the lowest or highest values for the selected field, and click OK.

Using the Values Sampling Method

Instructions for creating Values samples uses instructions that are similar to creating filters in segment criteria block. For more information about adding a filter using an aggregate field, see "Adding Criteria Blocks to Segments" on page 104.

Constraining List Data for a Segment Tree

This option can limit the information in list files to members of the branch. For example, if you have a segment tree based on accounts, you may qualify specific contacts for the accounts based on criteria for that branch.

Additionally, this option can limit the information in list files to any additional items that you constrained on the segment tree branch. The following are scenarios for other types of constraints:

- **Nested Segment Node.** You may have a business-to-business company targeting business accounts. You split by predefined contact segments containing the decision-making contact at each account. You can make sure that you select the correct contact for each account by constraining the contact attribute for the nested segment node.
- **Split-by-Value Node.** You may have a banking company targeting customers split by checking and savings account types. You can make sure that you select the correct account type for each customer by constraining the bank account attribute for the split-by-value node.

You can constrain list data for a tree branch only when the following criteria are met:

- The branch is an embedded segment node in which the target level is different from the target level of the segment tree.
- The branch is a split node created using the values sampling method, and the split-by field is not an aggregated measure.

To constrain list data for a segment tree

1. In the Segment Tree Designer, locate the branch on which you want to constrain data.

   You can only constrain list data on nested segment tree nodes and split by value nodes.
2. Click the Actions button, and choose Constrain List Data from the menu.
3. In the dialog box, select a qualified item to constrain.
4. In the Constrain List Data dialog box, click OK.

Adding or Removing Constraints to the Eligible Audience

Members of the Segment Tree are constrained by the Eligible Audience. The eligible audience is a set of criteria that appear in the top section of the screen. The criteria are applied to the Eligible Audience by creating a segment with the constraining criteria and then adding the segment to the Eligible Audience section of the Segment Tree. For example, you may have an eligible audience that excludes inactive customers or only selects customers in your geographic region.

Optionally, your administrator can also designate a Global Audience, which is a set of criteria that applies to every segment tree and cannot be removed by other users. The Global Audience appears as a block that is more lightly shaded than the rest of the tree.

To add or remove constraints to the Eligible Audience

1. Click the actions button on the existing eligible audience block.
2. To add constraints, choose Add Constraint and perform the following steps:
   a. In the Add additional constraints to the Eligible Audience dialog box, click Browse.
   b. Select the segment that has the criteria to use to constrain the audience.
3. To remove constraints from the eligible audience, click the delete button on the constraint to be removed.

   NOTE: If the constraint is the Global Audience, you cannot remove it.
4. Click OK.

Segment Tree Advanced Options

Table 15 shows the options available in the Advanced Options tab for a segment tree.

Table 15. Segment Tree Advanced Options

Control Name	Description
Enable this Segment Tree for Event Triggered Campaign	Creates a set of prompted filters at the most optimized locations, based on segment criteria. For more information on prompted segmentation, see "About Prompted Segmentation" on page 123.
Display Prompted Nodes for this Segment Tree	Displays prompted nodes in segment trees. Deselect this check box to makes long, nested trees more legible.
Cache final segment result set for list output	When generating multiple lists based on the same segment, you can cache the final set of customers during the first list usage so that subsequent list uses can access those results for faster processing.
Automatically create remainder cells	If you do not want the tree designer to create remainders whenever you split a branch, deselect this option.
Default to include overlapping members from higher priority cells in lower priority cells	The standard behavior for new trees is to always enforce deduplication between target cells. When this option is checked, deduplication is not enforced for the segment tree. However, you can enable deduplication for specific branches using the branch properties.
Default to cache tree blocks for future jobs	Controls the default value of the check box named Cache this block for future jobs (in the properties of a newly created tree branch).
Campaign Load File format	The campaign load file format used for loading the members of the segment tree into each campaign. The campaign load file format controls what information about the segment tree members is loaded into the campaign history in the transactional database. This information may include name, address, and email address. When you first create a segment, the Campaign Load file format is set based on the default setting for the target level. You can select a different file format, if required. If you are not certain about the effect of changing the file format, contact your administrator.
List Preview File Format	The file that specified the format used for previewing lists.
Saved Result Set File Format	The file that specified the format used for saved result sets.

Table 15. Segment Tree Advanced Options

Control Name	Description
Statistical Significance Parameters	The following variables are used as inputs for the statistical significance calculation: ■ Confidence interval ■ Error tolerance, plus or minus ■ Default Response Rate
Delete List Cache (button)	Clicking this button submits a job to purge the cache entries associated with pulling a list requalified by any of the target cells in this segment tree. You would click this button prior to pulling a list to make sure that the list contains the most recent customers in the target cell.
Marketing XML	Click the Marketing XML tab to display an XML-based UI debug tool. Use this tool to analyze the generated XML for Marketing objects such as segment, segment tree and list format.

About Prompted Segmentation

Prompted segmentation is the methodology of adding dynamic segmentation criteria, known as *prompts*. Static criteria suffices for most normal outbound marketing strategies, but not for inbound marketing strategies where criteria must be added dynamically during run-time. Prompted segmentation allows marketers to maintain a single definition of enterprise segments and use it across both inbound and outbound scenarios.

You can implement prompted segmentation by inserting prompts into criteria blocks with the IS PROMPTED filter type. For more information on adding filters to a criteria block, see “Adding Criteria Blocks to Segments” on page 104.

For example, consider a Gold Segment that can be used in traditional outbound campaigns. Based on a calendar schedule, all the members of the Gold Segment are loaded into the campaign table, as shown in Figure 6. Prompted segmentation allows marketers to take this outbound segment and add PROMPTED criteria (for example, on Contact ID) to make the segment usable in inbound, event-triggered campaigns. Figure 6 shows the execution sequence in an event-triggered campaign. A customer ID is passed as context during campaign execution and the prompted criteria is converted to 'Customer is equal to/is in <list of input customer IDs>', which loads John Doe into the campaign table. Another way to understand prompted segmentation is to view it as a way to check for membership in a segment. For example, prompted segmentation checks whether John Doe is a member of the Gold segment.

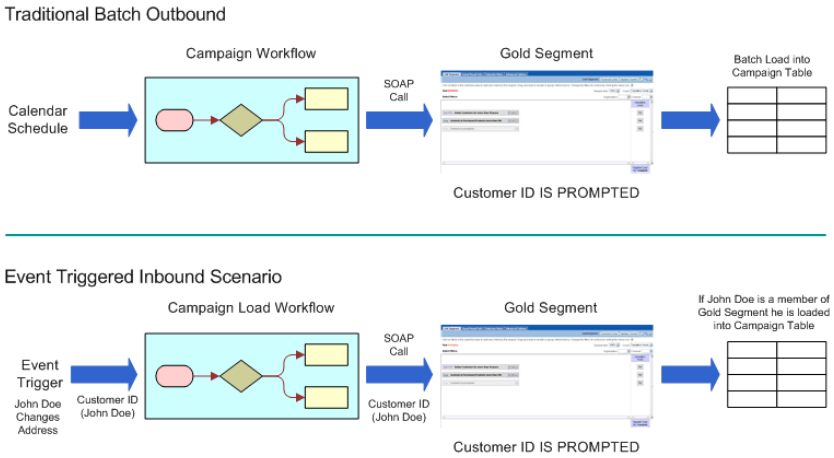


Figure 6. Prompted Segmentation

Scenario for Using Simple Prompted Segmentation

This scenario gives one example of how prompted segmentation may be used for simple event-driven marketing, where the type of offer depends on the context of an event. You may use prompted segmentation differently, depending on your business process.

A telecommunications company would like to make a retention offer to any customer who logs a complaint, but only if the customer is a female who lives in New York or California.

The following steps must be taken:

1. Capture the event (when the customer logs the complaint) and identify the customer.
2. Verify that the customer is a member of a segment whose criteria reflects the following:

Start With	Gender = “Female” AND Target Level ID IS PROMPTED
Keep	State in (‘CA’, ‘NY’) AND Target Level ID IS PROMPTED

3. Make the retention offer specified in the campaign.

The primary input from the external system is CUSTOMER_ID (or Target_Level_ID to generalize the requirement). In this simple scenario, you can assume that the segment criteria are predominantly based on the OLAP, and there are no real-time attributes sourced from the OLTP. The prompts are passed through SOAP. If the prompt is available, the appropriate SQL code is included, otherwise the criteria is ignored.

Scenario for Using Prompted Segmentation for Nested and Eligible Audience Segments

This scenario gives one example of how prompted segmentation may be used for nested and eligible audience segments. You may use prompted segmentation differently, depending on your business process.

A company would like to create a segment to pull all accounts in California and then pull all associated contacts for those accounts. The base contacts segment must reflect the dynamic constraint, as in the following:

Start With	<Account segment defining account in CA>
Keep	Target Level ID IS PROMPTED

Another nested example would be as follows:

Start With	<Nested segment 1>
Keep	State in ('CA') AND Target Level ID IS PROMPTED
Keep	<Nested segment 2>
Keep	Target Level ID IS PROMPTED

NOTE: For the purpose of optimization, the IS PROMPTED filter is added to blocks that do not have nested segments. If there is at least one nested segment, the last IS PROMPTED criteria block is added.

Manage Marketing Contact Planning Rules

This section describes the following topics:

- About Contact Planning Rules on page 126
- Creating, Modifying, and Deleting Contact Planning Rule Categories and Types on page 127
- Applying Contact Planning Rules to Segments on page 128
- Applying Contact Planning Rules to Segment Trees on page 129
- Executing Contact Planning Rules on page 129

About Contact Planning Rules

Contact planning rules are enterprise-wide rules that encompass recency, frequency, volume and channel constraints.

Contact planning rules allow a company to place volume, frequency and recency rules on all forms of communication across customer, channel, and program dimensions. Examples of contact planning rules include:

- Channel Volume Limiting;
  - 1,000 Outbound Calls per Day
  - 250,000 Emails per Week
  - Maximum of 100,000 direct mails
- Program Volume Limiting;
  - Maximum of 1,000 product downloads per day
  - Maximum of 500 total product giveaways
- Channel Frequency Limiting (on Customers);
  - Maximum of 1 Sales Calls per Month
  - Maximum of 5 Sales Emails per Month
- Program Recency Limiting;
  - Must wait 60 days following a retention message to deliver another sales message
  - Do not talk about other mortgage products when one is already in the works

A *channel* is a logical partition of a physical customer touch point. For example, the email touch point may have a Revenue/Cross Sell E-Mail Channel and a Servicing E-Mail Channel. There may be Enterprise Contact Planning (ECP) rules in place for sales e-mails, but there are no rules to restrict account administration emails (such as confirming address updates).

Volume rules can restrict channels and programs to a maximum period volume (such as daily) and lifetime volume. If a program participant transitions to a state such as Queue Outbound Call and the call center has been saturated for the day, the participant will not be queued for the call until the next day. Volume rules can also be placed on programs to control expenses. For example, a cost can be associated to each participant who passes through a free automobile test drive program, and participants can be limited to a certain number for each month.

Frequency limiting controls how often a customer can receive communication on the same channel. For example, a company may limit a customer to only two sales channel emails for each week. A program participant who has been limited on a particular channel would have to wait until the limit has passed before the next channel communication is delivered.

Recency rules coordinate competing programs across different marketing departments. For example, a company's credit card department, personal loans department, and mortgage department all have sales programs. Rather than bombard the customer with sales messages from the same company, a blocking matrix can specify the minimum time period between programs of the same category. For example, a matrix could require at least 110 days to pass before a customer is eligible for another sales program.

All customer attribute-based rules can be designed as a suppression segment. Table 16 gives an example of each type of contact planning rule and its segment suppression criteria. Note that contact planning rules use inclusion criteria.

Table 16. Contact Planning Rules and Segment Suppression Criteria

Type	Contact Planning Rule Segment Name	Contact Planning Rule Description	Contact Planning Rule Segment Inclusion Criteria
Global Rule	Global Rule 1	Customer cannot be in more than one "type" of program at a time (for example, acquisition).	Start with Current Active Program = True Keep Current Active Program Type <>Acquisition
Channel = email	Email Rule	For each customer, minimum of 30 days between 2 email offers.	Start with Today - Email Offer Date > 30
Channel = Call Center	CallCenter Rule	If customer is in "Do Not Call" List, do not contact.	Start with Do Not Call Flag = False
Channel = Direct Mail	DirectMail Rule	Maximum of 3 direct mail offers in a given quarter.	Start with #Direct Mail Offers in last quarter <= 3

NOTE: If a global rule is present, it is always applied.

Creating, Modifying, and Deleting Contact Planning Rule Categories and Types

You can use the following procedures to create, modify, and delete contact planning rule categories and types.

To create contact planning rule categories and types

1. Open the marketingwebexpressions.xml file, located at:

   `<OBIEE_INSTALL_DIR>\instances\instance1\config\OracleBIPresentationServicesComponent\coreapplication_obips1.`

2. Add the Contact Planning Rules Attributes section to create the specific contact planning rule category and type.

   For example:

```
<WebExpression name="treatmentChannel.E-Mail" usequotes="true">
  <messageKey>kmsgMktgGovRules</messageKey>
  <display>Channel</display>
  <default>Email</default>
  <context>ContactPlanningRules</context>
  <width />
</WebExpression>
```

3. Create a contact planning rule segment (for example, CallCenter Rule), and place it in a shared folder.
4. In the Oracle BI Administration page, click Manage Marketing Defaults.
5. Click the Contact Planning Rules tab.
6. Complete the fields to map the contact planning category and type to the contact planning rule segment.

To modify or delete contact planning rule categories and types

1. In the Contact Planning Rules tab, remove the contact planning rule segment that is mapped to a specific category and type.
2. Open the marketingwebexpressions.xml file, located at <OracleBIData>\web\config.
3. In the Contact Planning Rules Attributes section, modify or delete the WebExpression section for this category and type.

   NOTE: This category and type will not appear in the UI if deleted from the file.

   For example:

```
<WebExpression name="ProductType.Internal" usequotes="true">
  <messageKey>kmsgMktgGovRules</messageKey>
  <display>Product Class</display>
  <default>Internal Product</default>
  <context>ContactPlanningRules</context>
  <width />
</WebExpression>
```

Applying Contact Planning Rules to Segments

You can apply contact planning rules to segments by adding them to criteria blocks. For information on how to create and edit criteria blocks, see “Adding Criteria Blocks to Segments” on page 104.

For example, a company implements a campaign that uses a segment called 'High value California Customers,' whose segment criteria is:

Start With	Customer Value = High
Keep	State = CA

In the context of executing an email campaign, the system should automatically apply the email rule that corresponds to channel = Email. The resulting segment is:

Start With	Customer Value = High
Keep	State = CA
Keep	Email Rule Segment

Applying Contact Planning Rules to Segment Trees

You can apply contact planning rules to segment trees by adding them to criteria blocks. For information on how to create and edit criteria blocks, see "Adding Criteria Blocks to Segments" on page 104.

For example, a company's email campaign uses a segment tree to allocate different offers to different micro-segments of customers, according to the eligible audience concept. The goal is for the system to automatically apply the contact planning rules to everyone who qualifies for the segment tree. Use the following segment:

Start With	Contacts in 'Female Customers' (split by state)
Keep	State = CA
Keep	State = NY
Keep	State = WA

Executing Contact Planning Rules

Once the contact planning rules are set up, these rules are applied based on the context passed in during execution. There are two ways of passing this context:

- Through a test UI built into the segmentation engine, allowing the user to pick the contact planning rules type (for example, channel:email).
- Through the following SOAP calls: getCounts, writeListFiles, SaveResultSet. For details, see "SOAP Calls for Marketing" on page 21.

  NOTE: If a segment has been saved with contact planning rules, the rules are applied through SOAP calls. SOAP calls will override any contact planning rules.

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