

## **Oracle® Retail Data Model**

Reference

10g Release 2 (10.2)

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Oracle Retail Data Model is based on the ARTS 5.0 standard.

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# Contents

|   |      |
|---|------|
| <b>Preface</b> .....  | xix  |
| Audience.....   | xix  |
| Documentation Accessibility .....                             | xix  |
| Related Documents .....                                       | xx   |
| Conventions .....   | xx   |
| <br>  |      |
| <b>1 Introducing Oracle Retail Data Model</b>                 |      |
| What is Oracle Retail Data Model?.....                        | 1-1  |
| What Are the Components of Oracle Retail Data Model .....     | 1-2  |
| Oracle Products That Make Up Oracle Retail Data Model .....   | 1-2  |
| <br>  |      |
| <b>2 Logical Data Model of Oracle Retail Data Model</b>       |      |
| <b>Reference Entities</b> .....                               | 2-1  |
| Certificate Entities .....                                    | 2-2  |
| Competitor Entities.....                                      | 2-2  |
| Competitor Retail Item Entities.....                          | 2-3  |
| Customer Entities.....  | 2-3  |
| Customer Cluster Item Entities.....                           | 2-6  |
| Employee Entities.....  | 2-7  |
| Item Entities .....   | 2-9  |
| Item Cluster Customer Entities.....                           | 2-13 |
| Item Market Data Entities .....                               | 2-14 |
| Location Geography Entities .....                             | 2-14 |
| Media Entities .....  | 2-17 |
| Organization Entities.....                                    | 2-17 |
| Product Entities .....  | 2-22 |
| Promotion Entities .....                                      | 2-22 |
| SKU Item Entities .....                                       | 2-25 |
| SKU Item Business Unit Selling Price Assignment Entities..... | 2-30 |
| Tendor Repository Entities .....                              | 2-31 |
| Time Entities .....   | 2-32 |
| Time of Day Entities .....                                    | 2-34 |
| Time Transformation Entities.....                             | 2-35 |
| Touchpoint Entities.....                                      | 2-38 |

|  |      |
|--|------|
| Vendor Entities .....                    | 2-39 |
| Vendor SKU Business Unit Assignment..... | 2-40 |
| <b>Lookup Entities</b> .....             | 2-41 |
| Account Type.....                        | 2-44 |
| Activity Request Type .....              | 2-44 |
| Address Type.....                        | 2-44 |
| Analysis Duration .....                  | 2-44 |
| Appointment Type.....                    | 2-44 |
| Authorization Method.....                | 2-45 |
| Business Unit Types.....                 | 2-45 |
| Business Unit Usage Type .....           | 2-45 |
| Card Type.....                           | 2-46 |
| Certificate Age Band.....                | 2-46 |
| Certificate Type .....                   | 2-46 |
| Channel Type.....                        | 2-46 |
| Check In Type.....                       | 2-47 |
| Coating.....                             | 2-47 |
| Color.....                               | 2-47 |
| Cost Per Unit Type.....                  | 2-47 |
| Coupon Scan .....                        | 2-48 |
| Currency .....                           | 2-48 |
| Customer Occasion Type .....             | 2-48 |
| Customer Order And Hold Event .....      | 2-48 |
| Customer Pickup Type.....                | 2-48 |
| Denomination .....                       | 2-49 |
| Discount Type.....                       | 2-49 |
| Disposition Type .....                   | 2-49 |
| Dye .....                                | 2-49 |
| Employee Type.....                       | 2-49 |
| Entry Method.....                        | 2-49 |
| Entry Source.....                        | 2-49 |
| Environment Type .....                   | 2-49 |
| Fabric.....                              | 2-50 |
| Fiber.....                               | 2-50 |
| Hazardous Material Type .....            | 2-50 |
| Inventory Accounting Method.....         | 2-50 |
| Inventory Document Type.....             | 2-50 |
| Inventory Location Type.....             | 2-50 |
| Inventory Type .....                     | 2-50 |
| Inventory State.....                     | 2-50 |
| Inventory Status .....                   | 2-51 |
| Item State .....                         | 2-51 |
| Issue Type.....                          | 2-51 |
| Language Type .....                      | 2-51 |
| Local Authority Type.....                | 2-51 |
| Location Type .....                      | 2-51 |
| Manufacturer Coupon Family.....          | 2-52 |

|                                      |      |
|--------------------------------------|------|
| Media Type .....                     | 2-52 |
| Membership Type .....                | 2-52 |
| Miscellaneous Line Item Type.....    | 2-52 |
| Multiple Tender Class .....          | 2-52 |
| Order Category Type.....             | 2-52 |
| Order Line Item State .....          | 2-52 |
| Order Type .....                     | 2-53 |
| Order Source Type .....              | 2-53 |
| Order State .....                    | 2-53 |
| Order Status Type .....              | 2-54 |
| Pay Category.....                    | 2-54 |
| Pay Type .....                       | 2-54 |
| Personal Id Required Type .....      | 2-54 |
| Preference Type.....                 | 2-54 |
| Price List Lookup .....              | 2-54 |
| Profile Source.....                  | 2-55 |
| Reason.....                          | 2-55 |
| Reason Category.....                 | 2-55 |
| Retail Transaction Type Lookup.....  | 2-56 |
| Retail Type .....                    | 2-56 |
| Return Status.....                   | 2-56 |
| RFMP Method.....                     | 2-57 |
| Request Origin Type Lookup .....     | 2-57 |
| Sale Or Return Action Lookup.....    | 2-57 |
| Sale Weight Or Unit Count.....       | 2-57 |
| Security Required Type.....          | 2-57 |
| Selling Location Type .....          | 2-57 |
| Selling Status.....                  | 2-58 |
| Shipment Method.....                 | 2-58 |
| Shipment Priority .....              | 2-58 |
| Size .....                           | 2-58 |
| Size Type .....                      | 2-58 |
| SKU Item Style.....                  | 2-58 |
| SKU Item Type .....                  | 2-58 |
| Status Reason .....                  | 2-58 |
| Status Type.....                     | 2-59 |
| Stock Item Type .....                | 2-59 |
| Store Financial Ledger Account ..... | 2-59 |
| Tax Authority.....                   | 2-59 |
| Tax Exemptions .....                 | 2-59 |
| Taxable Group .....                  | 2-59 |
| Tender Class.....                    | 2-60 |
| Tender Type .....                    | 2-60 |
| Tender Repository Class .....        | 2-60 |
| Term Code.....                       | 2-60 |
| Theft Type .....                     | 2-61 |
| Transaction Type.....                | 2-61 |

|  |      |
|--|------|
| Transfer Type.....                                   | 2-61 |
| Unit Of Measure .....                                | 2-61 |
| UOM Conversion .....                                 | 2-62 |
| Value Type .....                                     | 2-62 |
| Variety Type.....                                    | 2-62 |
| Vendor Class.....                                    | 2-62 |
| Vendor Rating Type.....                              | 2-62 |
| Work Hour Type .....                                 | 2-62 |
| <b>Base Entities</b> .....                           | 2-62 |
| Certificate Escheated Day .....                      | 2-64 |
| Customer Order.....                                  | 2-64 |
| Customer Order Line Item.....                        | 2-65 |
| Customer Order Line Item State Assignment.....       | 2-66 |
| Customer Order State .....                           | 2-67 |
| Customer Service Request .....                       | 2-67 |
| Employee Labor .....                                 | 2-68 |
| Exchange Rate Currency Day.....                      | 2-69 |
| Inventory Control Document .....                     | 2-70 |
| Inventory Control Document Line Item .....           | 2-71 |
| Inventory Item State .....                           | 2-71 |
| Market Sales Item Week.....                          | 2-72 |
| Purchase Order.....                                  | 2-73 |
| Purchase Order Line Item.....                        | 2-74 |
| Purchase Order Line Item State .....                 | 2-75 |
| Purchase Order State .....                           | 2-76 |
| Retail Sale Return Line Item .....                   | 2-77 |
| Retail Sale Return Promotion Line Item .....         | 2-78 |
| Retail Tender History .....                          | 2-79 |
| Retail Tender Line Item.....                         | 2-80 |
| Retail Transaction.....                              | 2-81 |
| Retail Transaction Associate Assignment .....        | 2-82 |
| Retail Transaction Miscellaneous Line Item .....     | 2-83 |
| Retail Transaction Line Item.....                    | 2-83 |
| Sales Forecast Item Organization Hierarchy Week..... | 2-84 |
| Sales Plan Item Organization Hierarchy Week .....    | 2-85 |
| Tender Change Line Item .....                        | 2-86 |
| Till History .....                                   | 2-86 |
| Till Tax History.....                                | 2-87 |
| Till Tender History.....                             | 2-88 |
| Vendor SKU Cost Profit Day .....                     | 2-89 |
| <b>Derived Entities</b> .....                        | 2-90 |
| Certificate Activity Transaction Derived.....        | 2-91 |
| Customer Employee Relationship Day.....              | 2-92 |
| Customer Order Item Day Derived.....                 | 2-92 |
| Customer Order Line Item State Derived.....          | 2-93 |
| Customer RFMP Score.....                             | 2-93 |
| Customer SKU Sale Return Day Derived .....           | 2-94 |

|  |              |
|--|--------------|
| Catalog Request by Day Derived.....                      | 2-94         |
| Inventory Adjustment by Item Day Derived .....           | 2-95         |
| Inventory Unavailable Item Day .....                     | 2-95         |
| Inventory Position by Item Day Derived.....              | 2-96         |
| POS Tender Flow .....                                    | 2-96         |
| POS Transaction Flow .....                               | 2-97         |
| Retail Sale Return Item Day Derived .....                | 2-98         |
| Space Utilization Item Day Derived.....                  | 2-99         |
| Till Derived .....                                       | 2-99         |
| <b>Aggregate Entities .....</b>                          | <b>2-100</b> |
| Carrier Compliance Week Aggr.....                        | 2-102        |
| Certificate Activity Day Aggr.....                       | 2-102        |
| Certificate Activity Week Aggr .....                     | 2-103        |
| Customer Employee Relationship Month Aggr .....          | 2-103        |
| Customer Employee Sale Return Week Aggr .....            | 2-104        |
| Customer Order Department Day Aggr.....                  | 2-104        |
| Customer Order Department Month Aggr .....               | 2-105        |
| Customer Order Item Month Aggr .....                     | 2-106        |
| Customer Order Item Week Aggr .....                      | 2-107        |
| Customer Order Subclass Day Aggr .....                   | 2-108        |
| Customer Order Subclass Month Aggr .....                 | 2-109        |
| Customer Order Subclass Week Aggr .....                  | 2-110        |
| Inventory Budget By Week Aggr.....                       | 2-110        |
| Inventory Item State History Week.....                   | 2-111        |
| Inventory Position By Department Day Aggr .....          | 2-111        |
| Inventory Position By Department Week Aggr.....          | 2-111        |
| Inventory Position By Item Week Aggr.....                | 2-112        |
| Inventory Position Subclass Day Aggr .....               | 2-112        |
| Inventory Position Subclass Week Aggr.....               | 2-113        |
| Inventory Receipt By Item Day Aggr.....                  | 2-113        |
| Inventory Receipt By Item Week Aggr .....                | 2-113        |
| Inventory Receipt By Subclass Day Aggr.....              | 2-114        |
| Inventory Receipt By Subclass Week Aggr .....            | 2-114        |
| Inventory Transfer By Item Day Aggr .....                | 2-115        |
| Inventory Transfer By Item Week Aggr .....               | 2-115        |
| Inventory Transfer By Subclass Day Aggr .....            | 2-115        |
| Inventory Transfer By Subclass Week Aggr .....           | 2-116        |
| Inventory Vendor Compliance Aggr .....                   | 2-116        |
| Market Sales Department Week Aggr .....                  | 2-117        |
| Promotion Cost Contribution Week Aggr.....               | 2-117        |
| Promotion Sales Margin Week Aggr.....                    | 2-118        |
| Retail Markdown Department Day Aggr.....                 | 2-118        |
| Retail Markdown Department Week Aggr .....               | 2-119        |
| Retail Markdown Item Day Aggr .....                      | 2-119        |
| Retail Markdown Item Week Aggr .....                     | 2-120        |
| Retail Sale Return Organization Hierarchy Day Aggr ..... | 2-121        |
| Retail Sale Return Department Day Aggr .....             | 2-121        |

|   |       |
|---|-------|
| Retail Sale Return Department Week Aggr ..... | 2-122 |
| Retail Sale Return Department Month Aggr..... | 2-123 |
| Retail Sale Return Item Week Aggr .....       | 2-124 |
| Retail Sale Return Subclass Day Aggr.....     | 2-125 |
| Retail Sale Return Subclass Month Aggr .....  | 2-126 |
| Retail Sale Return Subclass Week Aggr.....    | 2-127 |
| Retail Transaction Emp Workstation Aggr ..... | 2-128 |
| Space Utilization Department Day Aggr.....    | 2-128 |
| Stock Ledger By Subclass Month Aggr.....      | 2-129 |
| Stock Ledger By Subclass Week Aggr.....       | 2-129 |
| Till History Workstation Aggr .....           | 2-130 |
| Till Tender History Employee Aggr.....        | 2-130 |
| Vendor Availability Item Day Aggr.....        | 2-131 |
| Vendor Compliance Item Week.....              | 2-131 |
| Vendor Compliance Week Aggr.....              | 2-132 |
| Vendor Contract Item Day Aggr .....           | 2-132 |

### 3 Physical Data Model of Oracle Retail Data Model

|  |             |
|--|-------------|
| <b>Introduction to the Oracle Retail Data Model Physical Model.....</b>  | <b>3-1</b>  |
| <b>Reference Tables .....</b>  | <b>3-2</b>  |
| <b>Lookup Tables .....</b>   | <b>3-21</b> |
| <b>Database Sequences.....</b>   | <b>3-22</b> |
| <b>Base Tables.....</b>  | <b>3-29</b> |
| <b>Derived Tables .....</b>  | <b>3-32</b> |
| <b>Aggregate Tables and Relational Materialized Views .....</b>          | <b>3-35</b> |
| <b>Physical Data Model of the Data Mining Component .....</b>            | <b>3-42</b> |
| <b>Physical Data Model of the OLAP Component .....</b>                   | <b>3-43</b> |
| Analytic Workspaces Used by the OLAP Component.....                      | 3-43        |
| OLAP Data Model in Oracle Retail Data Model .....                        | 3-44        |
| OLAP Dimensions in Oracle Retail Data Model .....                        | 3-44        |
| OLAP Cubes and Measures in Oracle Retail Data Model .....                | 3-48        |
| Relational Views Used for the OLAP Component.....                        | 3-57        |
| Relational Views Used When Loading the Analytic Workspace.....           | 3-57        |
| Relational Views of the OLAP Cubes Used for SQL Query and Reporting..... | 3-59        |

### 4 Logical to Physical Mappings in the Oracle Retail Data Model

|                           |     |
|---------------------------|-----|
| Entity Mapping Table..... | 4-1 |
|---------------------------|-----|

### 5 ETL for the Oracle Retail Data Model

|   |            |
|---|------------|
| <b>Introduction to Oracle Retail Data Model ETL .....</b>     | <b>5-1</b> |
| <b>PKG_INTRA_ETL_PROCESS .....</b>                            | <b>5-2</b> |
| <b>Intra-ETL Packages for Populating Derived Tables .....</b> | <b>5-2</b> |
| PKG_DWD_SPACE_UTLZTN_ITEM_DAY.sql.....                        | 5-3        |
| PKG_DWD_CUST_EMP_RLTNSHP_DAY.sql .....                        | 5-3        |
| PKG_DWD_CUST_SKU_SL_RETRN_DAY.sql .....                       | 5-4        |
| PKG_DWD_INV_UNAVL_BY_ITEM_DAY.sql.....                        | 5-4        |

|  |            |
|--|------------|
| PKG_DWD_INV_ADJ_BY_ITEM_DAY.sql.....   | 5-4        |
| PKG_DWD_INV_POSN_BY_ITEM_DAY.sql .....   | 5-4        |
| PKG_DWD_CUST_ORDR_LI_STATE.sql.....  | 5-5        |
| PKG_DWD_CERTIFICATE_ACTVTY_TRX.sql.....  | 5-5        |
| PKG_DWD_POS_CNTRL.sql.....   | 5-5        |
| PKG_DWD_CTLG_RQST_BY_DAY.sql.....  | 5-5        |
| PKG_DWD_POS_RTL.sql.....   | 5-6        |
| PKG_DWD_RTV_ITEM_DAY.sql .....   | 5-6        |
| PKG_DWD_CUST_ORDR_ITEM_DAY.sql.....  | 5-6        |
| PKG_DWD_POS_STORE_FINCL.sql .....  | 5-6        |
| PKG_DWD_RTL_SL_RETRN_ITEM_DAY.sql .....  | 5-6        |
| PKG_DWD_POS_TNDR_FLOW.sql.....   | 5-7        |
| PKG_INTRA_ETL_PROCESS.sql .....  | 5-7        |
| PKG_INTRA_ETL_UTIL.sql.....  | 5-7        |
| <b>Intra-ETL Scripts for Populating Aggregate Tables and Relational Materialized Views .....</b> | <b>5-7</b> |
| DWA_CUST_EMP_SL_RETRN_WK_MV.sql.....   | 5-9        |
| DWA_CUST_ORDR_ITEM_WK_MV.sql.....  | 5-9        |
| DWA_CUST_ORDR_SBC_DAY_MV.sql .....   | 5-10       |
| DWA_INV_RCPT_BY_ITEM_WK_MV.sql.....  | 5-10       |
| DWA_INV_RCPT_BY_SBC_DAY_MV.sql .....   | 5-10       |
| DWA_INV_TRNSFR_BY_ITEM_WK_MV.sql.....  | 5-11       |
| DWA_INV_TRNSFR_BY_SBC_DAY_MV.sql .....   | 5-11       |
| DWA_RTL_MRKDN_ITEM_DAY_MV.sql .....  | 5-12       |
| DWA_RTL_SL_RETRN_ITEM_WK_MV.sql .....  | 5-12       |
| DWA_RTL_SL_RETRN_SBC_DAY_MV.sql.....   | 5-12       |
| DWA_RTL_TRX_EMP_WRKSTN_MV.sql .....  | 5-13       |
| DWA_SPACE_UTLZTN_DEPT_DAY_MV.sql.....  | 5-13       |
| DWA_TILL_HIST_WRKSTN_MV.sql .....  | 5-14       |
| DWA_TILL_TNDR_HIST_EMP_MV.sql.....   | 5-14       |
| DWA_INV_POSN_BY_ITEM_WK_MV.sql.....  | 5-14       |
| DWA_INV_POSN_BY_SBC_DAY_MV.sql.....  | 5-15       |
| DWA_CERTIFICATE_ACTVTY_DAY_MV.sql .....  | 5-15       |
| DWA_CARRIER_CMPLNC_WK_MV.sql .....   | 5-15       |
| DWA_CUST_EMP_RLTNSHP_MO_MV.sql.....  | 5-16       |
| DWA_INV_ITEM_STATE_HIST_WK_MV.sql .....  | 5-16       |
| DWA_INV_RCPT_BY_ITEM_DAY_MV.sql.....   | 5-17       |
| DWA_INV_TRNSFR_BY_ITEM_DAY_MV.sql.....   | 5-17       |
| DWA_CUST_EMP_SL_RETRN_MO_MV.sql.....   | 5-18       |
| DWA_CUST_ORDR_DEPT_DAY_MV.sql .....  | 5-18       |
| DWA_CUST_ORDR_ITEM_MO_MV.sql.....  | 5-19       |
| DWA_CUST_ORDR_SBC_WK_MV.sql .....  | 5-19       |
| DWA_INV_RCPT_BY_SBC_WK_MV.sql .....  | 5-19       |
| DWA_INV_TRNSFR_BY_SBC_WK_MV.sql .....  | 5-20       |
| DWA_RTL_MRKDN_DEPT_DAY_MV.sql.....   | 5-20       |
| DWA_RTL_MRKDN_ITEM_WK_MV.sql .....   | 5-21       |
| DWA_RTL_SL_RETRN_DEPT_DAY_MV.sql.....  | 5-21       |
| DWA_RTL_SL_RETRN_ITEM_MO_MV.sql.....   | 5-21       |

|  |      |
|--|------|
| DWA_RTL_SL_RETRN_SBC_WK_MV.sql.....                | 5-22 |
| DWA_INV_POSN_BY_SBC_WK_MV.sql.....                 | 5-22 |
| DWA_INV_POSN_BY_DEPT_DAY_MV.sql.....               | 5-22 |
| DWA_RTL_SL_RT_ORG_HRCHY_DAY_MV.sql.....            | 5-23 |
| DWA_RTL_MRKDN_DEPT_WK_MV.sql.....                  | 5-23 |
| DWA_RTL_SL_RETRN_DEPT_WK_MV.sql.....               | 5-24 |
| DWA_RTL_SL_RETRN_SBC_MO_MV.sql.....                | 5-24 |
| DWA_CUST_ORDR_SBC_MO_MV.sql.....                   | 5-24 |
| DWA_INV_POSN_BY_DEPT_WK_MV.sql.....                | 5-25 |
| DWA_CERTIFICATE_ACTVTY_WK_MV.sql.....              | 5-25 |
| DWA_CUST_ORDR_DEPT_MO_MV.sql.....                  | 5-26 |
| DWA_MKT_SLS_DEPT_WK_MV.sql.....                    | 5-26 |
| DWA_INV_VNDR_CMPLNC_MV.sql.....                    | 5-26 |
| DWA_VNDR_CMPLNC_ITEM_WK_MV.sql.....                | 5-27 |
| DWA_VNDR_CMPLNC_WK_MV.sql.....                     | 5-27 |
| <b>Data Mining Component ETL</b> .....             | 5-28 |
| Data Mining ETL Packages.....                      | 5-28 |
| Model Build Procedures.....                        | 5-29 |
| Model Build Procedures for Each Type of Model..... | 5-30 |
| Model Build Procedure Parameters .....             | 5-30 |
| Model Build Procedure Output .....                 | 5-30 |
| <b>OLAP Component ETL</b> .....                    | 5-31 |
| When is the OLAP Component Populated?.....         | 5-31 |
| OLAP Component Installation Scripts.....           | 5-32 |
| OLAP_ETL_AW_LOAD Package.....                      | 5-33 |
| Summary of the OLAP_ETL_AW_LOAD Subprograms.....   | 5-34 |
| OLAP_ETL_AW_BUILD .....                            | 5-35 |
| OLAP_ETL_AW_CUBES.....                             | 5-37 |
| OLAP_ETL_AW_DIMBUILD .....                         | 5-38 |
| OLAP_ETL_AW_CUBEBUILD.....                         | 5-38 |
| OLAP_ETL_AW_REPL_DEFN.....                         | 5-39 |
| OLAP_ETL_AW_RESET_VIEWS.....                       | 5-40 |

## 6 Data Mining Models in Oracle Retail Data Model

|   |     |
|---|-----|
| <b>About Data Mining in Oracle Retail Data Model</b> .....                              | 6-1 |
| <b>Associate Basket Analysis Model</b> .....  | 6-2 |
| Examples of Desired Rules for the Associate Basket Analysis Model Report .....          | 6-2 |
| What the Discovered Rules for the Associate Basket Analysis Model Report Explain .....  | 6-3 |
| What the Associate Basket Analysis Model Mines .....                                    | 6-3 |
| Target Variables for the Associate Basket Analysis Model.....                           | 6-3 |
| Source Variables for the Associate Basket Analysis Model .....                          | 6-4 |
| Columns Included in the Target Views of the Associate Basket Analysis Model Report..... | 6-5 |
| <b>Associate Loss Analysis Model</b> .....  | 6-6 |
| Examples of Desired Rules for the Associate Loss Analysis Model Report.....             | 6-6 |
| What the Discovered Rules of the Associate Loss Analysis Model Explain .....            | 6-6 |
| What the Associate Loss Analysis Model Mines.....                                       | 6-7 |
| Target Variables for the Associate Loss Analysis Model .....                            | 6-7 |

|   |      |
|---|------|
| Source Variables for the Associate Loss Analysis Model.....                                     | 6-7  |
| Columns Included in the Target Views of the Associate Loss Analysis Model Report .....          | 6-9  |
| <b>Associate Sales Analysis Model</b> .....   | 6-9  |
| Examples of Desired Rules for the Associate Sales Analysis Model .....                          | 6-10 |
| What the Discovered Rules of the Associate Sales Analysis Model Explain .....                   | 6-10 |
| What the Associate Sales Analysis Model Mines .....   | 6-10 |
| Target Variables for the Associate Sales Analysis Model .....                                   | 6-11 |
| Source Variables for the Associate Sales Analysis Model.....                                    | 6-11 |
| Columns Included in the Target Views of the Associate Sales Analysis Model Report .....         | 6-12 |
| <b>Customer Category Mix Analysis Model</b> .....   | 6-13 |
| Examples of Desired Rules for the Customer Category Mix Analysis Model .....                    | 6-13 |
| What the Discovered Rules for the Customer Category Mix Analysis Model Explain.....             | 6-14 |
| What the Customer Category Mix Analysis Model Mines .....                                       | 6-14 |
| Target Variables for the Customer Category Mix Analysis Model .....                             | 6-14 |
| Source Variables for the Customer Category Mix Analysis Model.....                              | 6-14 |
| Columns Included in the Target Views for the Customer Category Mix Analysis Model Report        | 6-15 |
| <b>Customer Loyalty Analysis Model</b> .....  | 6-17 |
| Examples of Desired Rules for the Customer Loyalty Analysis Model.....                          | 6-17 |
| What the Discovered Rules for the Customer Loyalty Analysis Model Explain.....                  | 6-17 |
| What the Customer Loyalty Analysis Model Mines.....   | 6-18 |
| Target Variable for the Customer Loyalty Analysis Model.....                                    | 6-18 |
| Source Variables for the Customer Loyalty Analysis Model.....                                   | 6-18 |
| Loyalty Categories for the Customer Loyalty Analysis Model.....                                 | 6-19 |
| Columns Included in the Target Views for the Customer Loyalty Analysis Model Report             | 6-19 |
| <b>Frequent Shopper Category Mix Analysis Model</b> .....                                       | 6-20 |
| Examples of Desired Rules for the Frequent Shopper Category Mix Analysis Model.....             | 6-20 |
| What the Discovered Rules for the Frequent Shopper Category Mix Analysis Model Explain ....     | 6-21 |
| What the Frequent Shopper Category Mix Analysis Model Mines.....                                | 6-22 |
| Target Variable for the Frequent Shopper Category Mix Analysis Model.....                       | 6-22 |
| Source Variables for the Frequent Shopper Category Mix Analysis Model .....                     | 6-22 |
| Columns Included in the Target Views of the Frequent Shopper Category Mix Analysis Model Report | 6-22 |
| <b>Item Basket Analysis Model</b> .....   | 6-24 |
| Examples of Desired Rules for the Item Basket Analysis Model .....                              | 6-24 |
| What the Discovered Rules for the Item Basket Analysis Model Explain.....                       | 6-25 |
| What the Item Basket Analysis Model Mines .....   | 6-25 |
| Target Variable for the Item Basket Analysis Model .....  | 6-25 |
| Source Variables for the Item Basket Analysis Model.....  | 6-26 |
| Columns Included in the Target Views for the Item Basket Analysis Model Report .....            | 6-28 |
| <b>Item POS Loss Analysis Model</b> .....   | 6-29 |
| Examples of Desired Rules for the Item POS Loss Analysis Model .....                            | 6-29 |
| What the Discovered Rules for the Item POS Loss Analysis Model Explain.....                     | 6-29 |
| What the Item POS Loss Analysis Model Mines .....   | 6-29 |
| Target Variables for the Item POS Loss Analysis Model .....                                     | 6-30 |
| Source Variables for the Item POS Loss Analysis Model.....                                      | 6-30 |

|   |      |
|---|------|
| Columns Included in the Target Views of the Item POS Loss Analysis Model Report ..... | 6-36 |
| <b>POS Flow Analysis Model</b> .....  | 6-37 |
| Examples of Desired Rules for the POS Flow Analysis Model .....                       | 6-37 |
| What the Discovered Rules for the POS Flow Analysis Model Explain .....               | 6-38 |
| What the POS Flow Analysis Model Mines .....  | 6-38 |
| Target Variables for the POS Flow Analysis Model .....                                | 6-38 |
| Source Variables for the POS Flow Analysis Model .....                                | 6-39 |
| Columns Included in the Target Views of the POS Flow Analysis Model Report.....       | 6-42 |
| <b>Store Loss Analysis Model</b> .....  | 6-42 |
| Examples of Desired Rules for the Store Loss Analysis Model.....                      | 6-43 |
| What the Discovered Rules for the Store Loss Analysis Model Explain .....             | 6-43 |
| What the Store Loss Analysis Model Mines.....   | 6-43 |
| Target Variables for the Store Loss Analysis Model .....                              | 6-43 |
| Source Variables for the Store Loss Analysis Model .....                              | 6-44 |
| Columns Included in the Target Views for the Store Loss Analysis Model Report .....   | 6-46 |

## Index

## List of Tables

|      |  |       |
|------|--|-------|
| 1-1  | Oracle Development Tools Used with Oracle Retail Data Model .....                      | 1-3   |
| 2-1  | Certificate Entity Descriptions .....  | 2-2   |
| 2-2  | Competitor Retail Item Entity Descriptions.....  | 2-3   |
| 2-3  | Customer Entity Descriptions.....  | 2-4   |
| 2-4  | Customer Cluster Item Entity Descriptions.....   | 2-7   |
| 2-5  | Employee Entity Descriptions.....  | 2-8   |
| 2-6  | Item Entity Descriptions .....   | 2-11  |
| 2-7  | Item Cluster Customer Entities.....  | 2-14  |
| 2-8  | Item Market Data Descriptions.....   | 2-14  |
| 2-9  | Location Geography Entity Descriptions .....   | 2-15  |
| 2-10 | Media Entity Descriptions .....  | 2-17  |
| 2-11 | Organization Entity Description.....   | 2-18  |
| 2-12 | Promotion Entity Descriptions.....   | 2-23  |
| 2-13 | SKU Item Entity Descriptions .....   | 2-28  |
| 2-14 | SKU Business Unit Selling Price Assignment.....  | 2-31  |
| 2-15 | Time Entity Description .....  | 2-34  |
| 2-16 | Time of Day Entity Descriptions .....  | 2-35  |
| 2-17 | Time Transformation Entity Description .....   | 2-37  |
| 2-18 | Touchpoint Entity Descriptions.....  | 2-38  |
| 2-19 | Vendor Entity Descriptions .....   | 2-39  |
| 2-20 | Vendor SKU Business Unit Assignment Entity Description .....                           | 2-41  |
| 2-21 | Lookup Entity Descriptions.....  | 2-41  |
| 2-22 | Base Entity Descriptions .....   | 2-62  |
| 2-23 | Derived Entity Descriptions .....  | 2-90  |
| 2-24 | Aggregate Entity Descriptions.....   | 2-100 |
| 3-1  | Reference Tables, Descriptions, and Notes .....  | 3-2   |
| 3-2  | Lookup Table Names, Descriptions, and Notes.....                                       | 3-21  |
| 3-3  | Database Sequences .....   | 3-22  |
| 3-4  | Base Table Names, Descriptions, and Notes.....   | 3-29  |
| 3-5  | Derived Table Names, Descriptions, and Notes .....                                     | 3-32  |
| 3-6  | Source-Target Table Level Mappings for Derived Tables .....                            | 3-34  |
| 3-7  | Aggregate Table and Relational Materialized Views Names, Descriptions, and Notes ..... | 3-36  |
| 3-8  | Source to Target Mapping for Aggregate Tables .....                                    | 3-39  |
| 3-9  | Data Mining Model and Views Containing Model Rules.....                                | 3-43  |
| 3-10 | Organization Dimension.....  | 3-45  |
| 3-11 | Product Dimension.....   | 3-46  |
| 3-12 | Time Dimension.....  | 3-47  |
| 3-13 | Measures in the Sales Cube .....   | 3-49  |
| 3-14 | Measures in the Sales Forecast Cube .....  | 3-50  |
| 3-15 | Measures in the Inventory Cube.....  | 3-53  |
| 3-16 | Measures in the Inventory Forecast Cube.....   | 3-54  |
| 3-17 | Relational Views Used When Populating OLAP Dimensions .....                            | 3-57  |
| 4-1  | Entity Mapping Table.....  | 4-1   |
| 5-1  | Intra-ETL Scripts for Database Packages.....   | 5-2   |
| 5-2  | Relational Materialized View Scripts.....  | 5-7   |
| 5-3  | Data Mining Packages in Oracle Retail Data Model.....                                  | 5-29  |
| 5-4  | OLAP_ETL_AW_LOAD Package Subprograms.....  | 5-34  |
| 5-5  | OLAP_ETL_AW_BUILD Procedure Parameters .....   | 5-36  |
| 5-6  | OLAP_ETL_AW_CUBES Procedure Parameters.....  | 5-37  |
| 5-7  | OLAP_ETL_AW_DIMBUILD Procedure Parameters .....  | 5-38  |
| 5-8  | OLAP_ETL_AW_CUBEBUILD Procedure Parameters .....                                       | 5-38  |
| 5-9  | OLAP_ETL_AW_REPL_DEFN Procedure Parameters.....  | 5-39  |

|      |   |      |
|------|---|------|
| 5-10 | OLAP_ETL_AW_BUILD Procedure Parameters .....    | 5-40 |
| 6-1  | Oracle Retail Data Model Data Model Types ..... | 6-2  |



## List of Figures

|      |   |       |
|------|---|-------|
| 2-1  | Customer Entity Relationships .....                                       | 2-4   |
| 2-2  | Employee Entity Relationships .....                                       | 2-8   |
| 2-3  | Item Entity Relationships.....  | 2-10  |
| 2-4  | Location Geography Entity Relationships .....                             | 2-15  |
| 2-5  | Organization Entity Relationships .....                                   | 2-18  |
| 2-6  | Promotion Entity Relationships .....                                      | 2-23  |
| 2-7  | SKU Item Entity Relationship .....  | 2-27  |
| 2-8  | Tender Repository Relationships .....                                     | 2-32  |
| 2-9  | Time Entity Relationships.....  | 2-33  |
| 2-10 | Time of Day Entity Relationships.....                                     | 2-35  |
| 2-11 | Time Transformation Entity Relationships .....                            | 2-36  |
| 2-12 | Customer Order Entity Relationships.....                                  | 2-65  |
| 2-13 | Customer Order Line Item Entity Relationships.....                        | 2-66  |
| 2-14 | Customer Order Line Item State Assignment Entity Relationships.....       | 2-67  |
| 2-15 | Customer Order State Entity Relationships.....                            | 2-67  |
| 2-16 | Customer Service Request Entity Relationships .....                       | 2-68  |
| 2-17 | Employee Labor Entity Relationships .....                                 | 2-69  |
| 2-18 | Exchange Rate Currency Day.....   | 2-70  |
| 2-19 | Inventory Control Document Entity Relationships .....                     | 2-70  |
| 2-20 | Inventory Control Document Line Item Entity Relationships .....           | 2-71  |
| 2-21 | Inventory Item State Entity Relationships .....                           | 2-72  |
| 2-22 | Market Sales Item Week Entity Relationships .....                         | 2-73  |
| 2-23 | Purchase Order Entity Relationships.....                                  | 2-74  |
| 2-24 | Purchase Order Line Item Entity Relationships.....                        | 2-75  |
| 2-25 | Purchase Order Line Item State Entity Relationships .....                 | 2-76  |
| 2-26 | Purchase Order State Entity Relationships .....                           | 2-77  |
| 2-27 | Retail Sale Return Line Item Entity Relationships .....                   | 2-78  |
| 2-28 | Retail Sale Return Promotion Line Item Entity Relationships .....         | 2-79  |
| 2-29 | Retail Tender History Entity Relationships .....                          | 2-80  |
| 2-30 | Retail Tender Line Item Entity Relationships.....                         | 2-81  |
| 2-31 | Retail Transaction Entity Relationships.....                              | 2-82  |
| 2-32 | Retail Transaction Associate Assignment Entity Relationships.....         | 2-82  |
| 2-33 | Retail Transaction Line Item Entity Relationships.....                    | 2-84  |
| 2-34 | Sales Forecast Item Organization Hierarchy Week Entity Relationships..... | 2-85  |
| 2-35 | Sales Plan Item Organization Hierarchy Week Entity Relationships .....    | 2-86  |
| 2-36 | Till History Entity Relationships .....                                   | 2-87  |
| 2-37 | Till Tax History Entity Relationships.....                                | 2-88  |
| 2-38 | Till Tender History Entity Relationships.....                             | 2-89  |
| 2-39 | Vendor SKU Cost Profit Day Entity Relationships.....                      | 2-90  |
| 2-40 | Certificate Activity Transaction Derived Entity Relationships.....        | 2-92  |
| 2-41 | Customer Employee Relationship Day Entity Relationships.....              | 2-92  |
| 2-42 | Customer Order Item Day Derived Entity Relationships.....                 | 2-93  |
| 2-43 | Customer Order Line Item State Derived Entity Relationships.....          | 2-93  |
| 2-44 | Customer RFMP Score Entity Relationships.....                             | 2-94  |
| 2-45 | Customer SKU Sale Return Day Derived Entity Relationships .....           | 2-94  |
| 2-46 | Catalog Request by Day Derived Entity Relationships.....                  | 2-95  |
| 2-47 | Inventory Adjustment by Item Day Derived Entity Relationships .....       | 2-95  |
| 2-48 | Inventory Unavailable Item Day Entity Relationships .....                 | 2-96  |
| 2-49 | Inventory Position by Item Day Derived Entity Relationships.....          | 2-96  |
| 2-50 | POS Tender Flow Entity Relationships .....                                | 2-97  |
| 2-51 | POS Transaction Flow Entity Relationships .....                           | 2-98  |
| 2-52 | Retail Sale Return Item Day Derived Entity Relationships .....            | 2-99  |
| 2-53 | Space Utilization Item Day Derived Entity Relationships.....              | 2-99  |
| 2-54 | Till Derived Entity Relationships .....                                   | 2-100 |

|       |  |       |
|-------|--|-------|
| 2-55  | Carrier Compliance Week Aggr Entity Relationships.....                       | 2-102 |
| 2-56  | Certificate Activity Day Aggr Entity Relationships.....                      | 2-103 |
| 2-57  | Certificate Activity Week Aggr Entity Relationships.....                     | 2-103 |
| 2-58  | Customer Employee Relationship Month Aggr Entity Relationships.....          | 2-104 |
| 2-59  | Customer Employee Sale Return Week Aggr Entity Relationships.....            | 2-104 |
| 2-60  | Customer Order Department Day Aggr Entity Relationships.....                 | 2-105 |
| 2-61  | Customer Order Department Month Aggr Entity Relationships.....               | 2-106 |
| 2-62  | Customer Order Item Month Aggr Entity Relationships.....                     | 2-107 |
| 2-63  | Customer Order Item Week Aggr Entity Relationship.....                       | 2-108 |
| 2-64  | Customer Order Subclass Day Aggr Entity Relationship.....                    | 2-109 |
| 2-65  | Customer Order Subclass Month Aggr Entity Relationship.....                  | 2-109 |
| 2-66  | Customer Order Subclass Week Aggr Entity Relationships.....                  | 2-110 |
| 2-67  | Inventory Budget By Week Aggr Entity Relationships.....                      | 2-110 |
| 2-68  | Inventory Item State History Week Entity Relationships.....                  | 2-111 |
| 2-69  | Inventory Position By Department Day Aggr Entity Relationships.....          | 2-111 |
| 2-70  | Inventory Position By Department Week Aggr Entity Relationships.....         | 2-112 |
| 2-71  | Inventory Position By Item Week Aggr Entity Relationships.....               | 2-112 |
| 2-72  | Inventory Position Subclass Day Aggr Entity Relationships.....               | 2-112 |
| 2-73  | Inventory Position Subclass Week Aggr Entity Relationships.....              | 2-113 |
| 2-74  | Inventory Receipt By Item Day Aggr Entity Relationships.....                 | 2-113 |
| 2-75  | Inventory Receipt By Item Week Aggr Entity Relationships.....                | 2-114 |
| 2-76  | Inventory Receipt By Subclass Day Aggr Entity Relationships.....             | 2-114 |
| 2-77  | Inventory Receipt By Subclass Week Aggr Entity Relationships.....            | 2-114 |
| 2-78  | Inventory Transfer By Item Day Aggr Entity Relationships.....                | 2-115 |
| 2-79  | Inventory Transfer By Item Week Aggr.....                                    | 2-115 |
| 2-80  | Inventory Transfer By Subclass Day Aggr.....                                 | 2-116 |
| 2-81  | Inventory Transfer By Subclass Week Aggr Entity Relationships.....           | 2-116 |
| 2-82  | Inventory Vendor Compliance Aggr Entity Relationships.....                   | 2-117 |
| 2-83  | Market Sales Department Week Aggr Entity Relationships.....                  | 2-117 |
| 2-84  | Promotion Cost Contribution Week Aggr Entity Relationships.....              | 2-118 |
| 2-85  | Promotion Sales Margin Week Aggr Entity Relationships.....                   | 2-118 |
| 2-86  | Retail Markdown Department Day Aggr Entity Relationships.....                | 2-119 |
| 2-87  | Retail Markdown Department Week Aggr Entity Relationships.....               | 2-119 |
| 2-88  | Retail Markdown Item Day Aggr Entity Relationships.....                      | 2-120 |
| 2-89  | Retail Markdown Item Week Aggr Entity Relationships.....                     | 2-120 |
| 2-90  | Retail Sale Return Organization Hierarchy Day Aggr Entity Relationships..... | 2-121 |
| 2-91  | Retail Sale Return Department Day Aggr Entity Relationships.....             | 2-122 |
| 2-92  | Retail Sale Return Department Week Aggr Entity Relationships.....            | 2-123 |
| 2-93  | Retail Sale Return Department Month Aggr Entity Relationships.....           | 2-124 |
| 2-94  | Retail Sale Return Item Week Aggr Entity Relationships.....                  | 2-125 |
| 2-95  | Retail Sale Return Subclass Day Aggr Entity Relationships.....               | 2-126 |
| 2-96  | Retail Sale Return Subclass Month Aggr Entity Relationships.....             | 2-127 |
| 2-97  | Retail Sale Return Subclass Week Aggr Entity Relationships.....              | 2-128 |
| 2-98  | Retail Transaction Emp Workstation Aggr.....                                 | 2-128 |
| 2-99  | Space Utilization Department Day Aggr Entity Relationships.....              | 2-129 |
| 2-100 | Stock Ledger By Subclass Month Aggr Entity Relationships.....                | 2-129 |
| 2-101 | Stock Ledger By Subclass Week Aggr Entity Relationships.....                 | 2-130 |
| 2-102 | Till History Workstation Aggr Entity Relationships.....                      | 2-130 |
| 2-103 | Till Tender History Employee Aggr Entity Relationships.....                  | 2-131 |
| 2-104 | Vendor Availability Item Day Aggr Entity Relationships.....                  | 2-131 |
| 2-105 | Vendor Compliance Item Week Entity Relationships.....                        | 2-132 |
| 2-106 | Vendor Compliance Week Aggr Entity Relationships.....                        | 2-132 |
| 2-107 | Vendor Contract Item Day Aggr Entity Relationships.....                      | 2-132 |
| 3-1   | Organization Dimension.....  | 3-46  |
| 3-2   | Product Dimension.....   | 3-47  |

3-3 Time Dimension ..... 3-48

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# Preface

The *Oracle Retail Data Model Reference* contains technical information about the various components and objects for the Oracle Retail Data Model, a start-up kit for implementing a retail data warehouse solution. This technical information includes information about the Oracle Retail Data Model logical and physical data models, intra-ETL, data mining packages, and analytic workspace.

## Audience

This document is intended for data modelers, data warehouse administrators, IT staff, and ETL developers.

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## Related Documents

For more information, see the following document in the Oracle Retail Data Model documentation set:

- *Oracle Retail Data Model Installation Guide*
- *Oracle Retail Data Model Operations Guide*
- *Oracle Retail Data Model Release Notes*

## Conventions

The following text conventions are used in this document:

| <b>Convention</b>      | <b>Meaning</b>   |
|------------------------|--|
| <b>boldface</b>        | Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.         |
| <i>italic</i>          | Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.                          |
| <code>monospace</code> | Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter. |

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# Introducing Oracle Retail Data Model

This chapter introduces the Oracle Retail Data Model, which is a start-up kit for implementing a retail data warehouse solution:

- [What is Oracle Retail Data Model?](#)
- [Oracle Products That Make Up Oracle Retail Data Model](#)
- [What Are the Components of Oracle Retail Data Model](#)

## What is Oracle Retail Data Model?

Oracle Retail Data Model is a startup kit for implementing a retail business intelligence solution. It is a standards-based data model, designed and pre-tuned for Oracle data warehouses, including the HP Oracle Database Machine.

The Oracle Retail Data Model for Retail offers a single-vendor solution package that is tightly integrated with the business intelligence platform. With pre-built data mining, On-line Analytical Processing (OLAP) and dimensional models, Oracle Retail Data Model provides you with industry-specific metrics and insights that you can act on immediately to improve your bottom line. These BI solution offerings take advantage of Oracle's scalability and reliability, using Oracle's familiar optimization, parallelism, and performance engineering within the database.

Oracle Retail Data Model can be used in any application environment and is easily extendable.

By leveraging Oracle's strong retail domain expertise, Oracle Retail Data Model provides an industry standard compliant foundation schema that is modern, relevant, topical, and addresses needs of most retail segments. This normalized foundation schema serves as a detailed and structured representation of the retail business, providing an integrated base for business information with fully defined entities and relationships. Oracle Retail Data Model includes an exhaustive set of embedded advanced analytics, using Oracle's OLAP and data mining technology. You can take advantage of pre-built and pre-tested solution sets designed by industry experts that deliver relevant insights, are actionable, and aimed at improving both top-line and bottom-line results. You can see summarized, aggregated information or quickly navigate to drill-down transaction details to better understand business issues. For example, with Oracle Retail Data Model's out-of-the-box sample reports, merchandisers gain improved insight into product affinities; loss prevention specialists gain improved visibility; and marketing analysts gain improved understanding of promotional effectiveness and customer segmentation. You can add your own reports as well. Oracle Retail Data Model, combined with Oracle technology, provides all of the components required for a complete and extendable Retail Data Warehouse and Business Intelligence framework in order to eliminate

complex and costly integration requirements, all designed to reduce your total cost of ownership.

Oracle Retail Data Model is a pre-built, pre-tested solution designed by industry experts to help retailers maximize the value of their Oracle data warehouse. Using sophisticated trending and data mining capabilities based on Oracle's OLAP and data mining technology, retailers - including grocery stores, department stores, specialty store chains, mass merchants, convenience stores, and multi-channel retailers - now have the data analysis capabilities to develop retail-specific insights that are relevant, actionable, and can improve both top-line and bottom-line results.

With Oracle Retail Data Model, you can jump-start the design and implementation of a retail data warehouse to quickly achieve a positive ROI for your data warehousing and business intelligence project with a predictable implementation effort

## What Are the Components of Oracle Retail Data Model

ORDM includes the following components:

- Logical model  
The logical model is described in detail in [Chapter 2, "Logical Data Model of Oracle Retail Data Model"](#).
- Physical model  
The physical model is described in detail in [Chapter 3, "Physical Data Model of Oracle Retail Data Model"](#). The logical to physical mapping is detailed in [Chapter 4, "Logical to Physical Mappings in the Oracle Retail Data Model"](#).
- Intra-ETL database packages and SQL scripts to extract, transform, and load (ETL) data from one layer of Oracle Retail Data Model to another.  
The intra-ETL packages and SQL scripts are described in detail in [Chapter 5, "ETL for the Oracle Retail Data Model"](#). How to use these packages and scripts to populate a data warehouse based on the Oracle Retail Data Model is discussed in *Oracle Retail Data Model Operations Guide*.
- Pre-defined data mining models.  
These models are described in detail in [Chapter 6, "Data Mining Models in Oracle Retail Data Model"](#). How to create these models is discussed in *Oracle Retail Data Model Operations Guide*.
- Sample reports and dashboards using OBIEE.  
These reports are discussed in *Oracle Retail Data Model Operations Guide*.
- DDL and installation scripts

## Oracle Products That Make Up Oracle Retail Data Model

Several Oracle technologies are involved in building the infrastructure for retail business intelligence.

### **Oracle Database with OLAP, Data Mining and Partitioning Option**

Oracle Retail Data Model utilizes a complete Oracle technical stack. It leverages the following data warehousing features of the Oracle database: SQL model, compression, partitioning, advanced statistical functions, materialized views, data mining, and online analytical processing (OLAP).

**Tip:** To save some money, you can consider using RAC and commodity hardware.

### Oracle Development Tools

The following Oracle tools can be used to customize the predefined logical and physical models provided with ORDM, or to populate the target relational tables, materialized views, or OLAP cubes.

**Table 1–1 Oracle Development Tools Used with Oracle Retail Data Model**

| <b>Name</b>                | <b>Use</b>                                       |
|----------------------------|--|
| Designer                   | To create the logical model                      |
| SQL Developer or SQL*Plus  | To create or modify database objects             |
| Oracle Warehouse Builder   | For the process control of the intra ETL process |
| Analytic Workspace Manager | To populate the target OLAP cubes                |

### Oracle BI EE Presentation Tools

Oracle Business Intelligence Suite Enterprise Edition (Oracle BI EE) is a comprehensive suite of enterprise BI products that delivers a full range of analysis and reporting capabilities. You can use Oracle BI EE Answers and Dashboard presentation tools to customize the predefined sample dashboard reports that are provided with Oracle Retail Data Model.



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# Logical Data Model of Oracle Retail Data Model

The logical data model of the Oracle Retail Data Model defines the business entities and their relationships in order provide a clear understanding of the business and data requirements for the data warehouse.

The logical data model includes the following entities:

- [Reference Entities](#)
- [Lookup Entities](#)
- [Base Entities](#)
- [Derived Entities](#)
- [Aggregate Entities](#)

**See also:** For a discussion of the data model of the Oracle Retail Data Model OLAP component, see "[OLAP Data Model in Oracle Retail Data Model](#)" on page 3-44.

## Reference Entities

Reference Entities define the entities within, and associated with, the retail organization for which data would be recorded and analyzed. Reference entities record the structure of the retail organization and all people, products and organizations associated with it.

Descriptions of the Reference entities are provided in the following topics:

[Certificate Entities](#)  
[Competitor Entities](#)  
[Competitor Retail Item Entities](#)  
[Customer Entities](#)  
[Customer Cluster Item Entities](#)  
[Employee Entities](#)  
[Item Entities](#)  
[Item Cluster Customer Entities](#)  
[Item Market Data Entities](#)  
[Location Geography Entities](#)  
[Media Entities](#)  
[Organization Entities](#)  
[Product Entities](#)  
[Promotion Entities](#)  
[SKU Item Entities](#)

[SKU Item Business Unit Selling Price Assignment Entities](#)  
[Tendor Repository Entities](#)  
[Time Entities](#)  
[Time of Day Entities](#)  
[Time Transformation Entities](#)  
[Touchpoint Entities](#)  
[Vendor Entities](#)  
[Vendor SKU Business Unit Assignment](#)

## Certificate Entities

A certificate is issued by the organization business unit (such as a store) and has a monetary value toward purchase for goods or services. Therefore a certificate represents a current liability that is carried until the certificate is redeemed, expires or is otherwise no longer valid. Certificate could be a gift certificate, voucher, or store credit and it records how and by whom the certificate is issued and how the unspent balance should be handled. Typically a certificate is used as a tender type. For loss prevention purposes, it helps in identifying cashiers who have an abnormal number of certificate issued or redeemed, or a ratio of sales to returns for a particular certificate type. The number of outstanding certificates is also tracked to allow trending and certificate age reporting, escheat reporting, and other regulatory requirements

Table 2–1 describes the Certificate entities.

**Table 2–1 Certificate Entity Descriptions**

| Entity Name                | Description   |
|----------------------------|---|
| CERTIFICATE                | A certificate with a face monetary value issued by a store for subsequent exchange for merchandise.   |
| CERTIFICATE TYPE           | Type of certificate; for example, gift.   |
| DISPOSITION TYPE           | Defines how the unspent balance for a gift certificate is to be handled. Options include paying the balance back to the customer as cash, issuing another gift certificate for the remaining balance, and others.   |
| ISSUE TYPE                 | A code to denote how the RETAIL STORE issues Certificates, for example, embossed or printed at the point of sale.   |
| ORGANIZATION BUSINESS UNIT | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse. |

## Competitor Entities

Competitor is a retailer with a product range and customer base similar to those for the organization business unit and its channels. The competitor entity holds information about each competitor store and associates it with a location in the organization. Competitor pricing details can then be associated with a specific competitor location and mapped to an item in the product hierarchy. This structure provides the means to compare competitor prices for similar or identical items, at a direct competitor location. With this type of timely information, promotion, and price change strategy can be implemented in time to prevent costly customer defections.

## Competitor Retail Item Entities

This entity associates Competitor Retail Item to a specific competitor location and maps it to an item in the product hierarchy. It provides the means to compare competitor prices for identical or similar items, at a direct competitor location and ranks the relative importance of a competitor location to a business unit. A retailer may identify a competitor location as the target for a given business unit and captures the competitor offer type (whether the item was on regular or promotional pricing at the time of the competitive shop) and multi-unit incentive (as a type of price; for example, 2 for 1.00, or 3 for 1.45). It also captures which competitor is driving the competitive price. A retailer may want to filter on the distance to pull only competitors within a certain radius of their own store. For example, a retailer can see the past month's competitor pricing history, compared to their own prices, only for competitor locations with a distance of 10 (distance) miles (distance UOM) or less.

Table 2–2 describes the Competitor Retail Item entities.

**Table 2–2 Competitor Retail Item Entity Descriptions**

| Entity Name                    | Description   |
|--------------------------------|---|
| COMPETITOR                     | A retailer with a product range and customer base similar to those for the store.   |
| COMPETITOR LOCATION            | Physical location of the competitor.  |
| COMPETITOR LOCATION ASSIGNMENT | The associative relationship between competitor locations and business unit locations. For example, a competitor grocery store may contain a bank, a florist, and a pharmacy. Competitors can be either primary or secondary. |
| COMPETITOR RETAIL ITEM         | A Retail Item that a competitor stocks that has, to the consumer, no apparent difference in form, fit, or function, but may have a different price.   |
| COMPETITOR RETAIL TYPE         | Lookup Table for retail types of retail items. Types include regular, promotion, and clearance.   |
| ORGANIZATION BUSINESS UNIT     | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse.           |

## Customer Entities

An individual or organization that purchases, may purchase, or did purchase goods or services from a retail organization, including both business-to-business (B2B), business-to-consumer (B2C) customers and prospects. Customer affiliations can include financial, non-financial groupings and their relationships to one another.

Syndicated data, for both B2B and B2C, from Dunn & Bradstreet, AcXiom, and Harte Hanks provides rich demographic, psychographics, and behavioral data attributes, such as customer occasion and preferences, for analysis and data mining. Flexible and generic demographic groups and related entities enable the retailer to capture credit history, education, employment, equipment, and hobbies among others. The model includes full support for customer group affinities for items, (which items appeal to which customer groups).

All types of customer accounts are supported including charge payments, rentals, and layaways. Various customer status records, including complete status history and reasons for status change, are maintained. Privacy protection, related to customer information, uses Oracle Encryption technology to safeguard customer data.

Figure 2–1 represents the Customer Entity Relationships.

**Figure 2–1 Customer Entity Relationships**

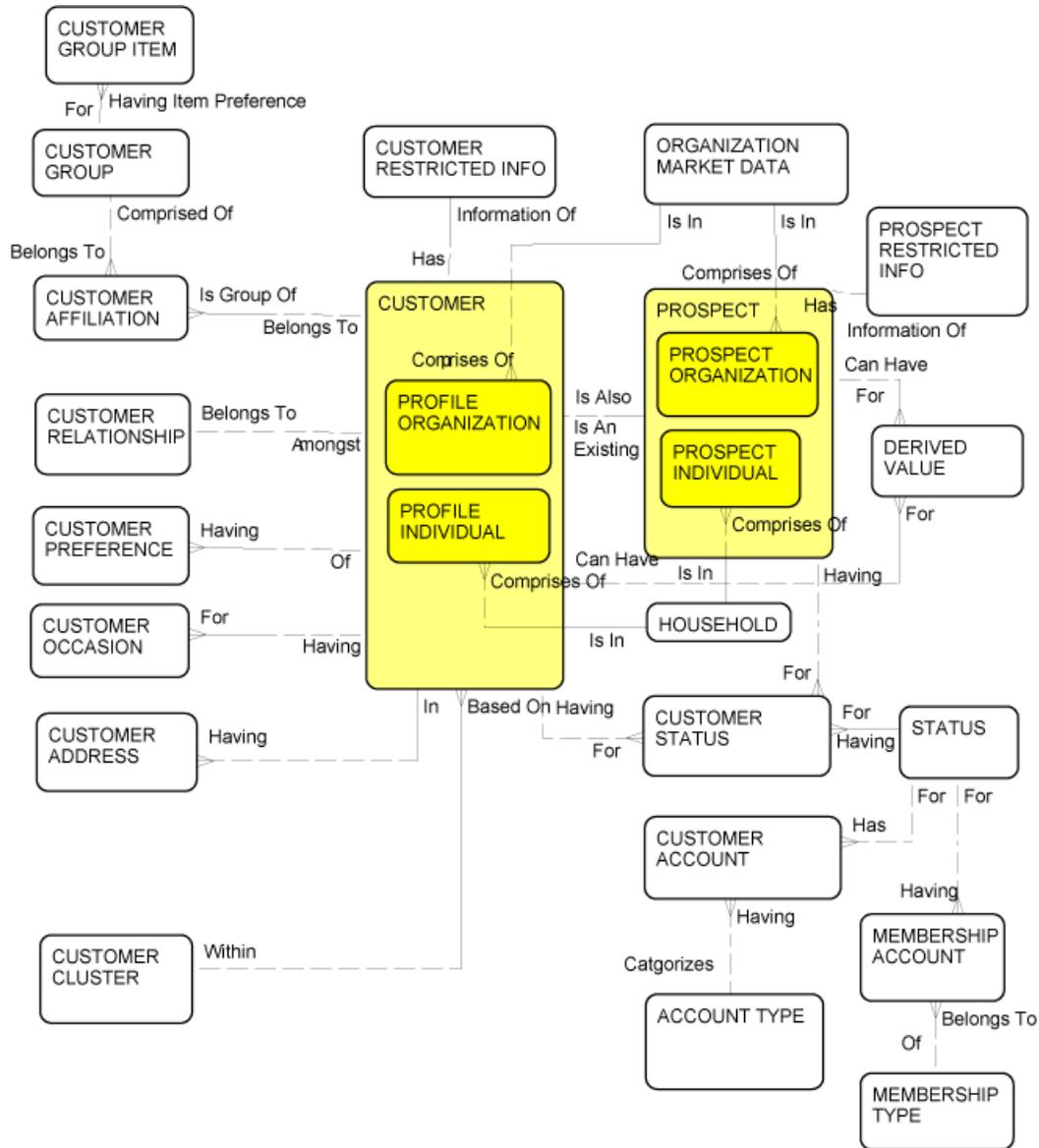


Table 2–3 describes Customer entities.

**Table 2–3 Customer Entity Descriptions**

| Entity Name      | Description  |
|------------------|--|
| ACCOUNT TYPE     | Lookup for account type. The account type could include Installment Payment Account, Charge Account, Trade Account, Layaway Account, and Rental Account. |
| ADDRESS LOCATION | Address of an individual location.   |
| CUSTOMER         | An individual or organization that purchases, may purchase, or did purchase goods and or services from a retail store.                                   |

**Table 2–3 (Cont.) Customer Entity Descriptions**

| <b>Entity Name</b>         | <b>Description</b>   |
|----------------------------|--|
| CUSTOMER ACCOUNT           | A charge account or other accounting relationship a customer has with the store or organization. An account exists to allow the store to record a series of transactions with the same customer and keep an ongoing record of monies owed by the customer and monies due to the customer.  |
| CUSTOMER ADDRESS           | Assigns the address location to a Profile or Customer.   |
| CUSTOMER AFFILIATION       | Associates a customer with a customer group.   |
| CUSTOMER GROUP             | A group of customers based on specific demographic and marketing attributes and properties. Examples include over 65 year old customers, students, unions, and other associations.   |
| CUSTOMER GROUP ITEM        | An association of Item and Customer Group, the data for this may come from external source.  |
| CUSTOMER CLUSTER           | Customer clusters and their descriptions. The data may come from an external source.   |
| CUSTOMER occasion          | Events celebrated or observed by a customer. For example, Mother's Day, Thanksgiving, and others.  |
| CUSTOMER occasion TYPE     | Lookup for Customer Occasion types.  |
| CUSTOMER RELATIONSHIP      | Association between customers. Example associating the Husband-Wife relationship.  |
| CUSTOMER RELATIONSHIP INFO | Information regarding the customer or prospect that is restricted to comply with privacy and other laws. This table is encrypted.  |
| CUSTOMER PREFERENCE        | Merchandise preferences of a Key Customer, for classes of items or other general categories.   |
| CUSTOMER STATUS            | Lookup for customer or prospect status.  |
| CUSTOMER QUICKFACTS        | Collection of Customer related measures.   |
| DEMOGRAPHY ATTRIBUTE       | A sub-level group or category further qualifying a set of data (Profile Group) collected about a customer to assist in marketing efforts. Examples: NC - Number of Children, EDL - Education Level, and others.  |
| DEMOGRAPHY GROUP           | The domain of classifications used to group profile information about a Party. Examples include the following: <ul style="list-style-type: none"> <li>■ CH - Credit History</li> <li>■ ED- Education</li> <li>■ EM - Employment</li> <li>■ EQ- Equipment</li> <li>■ HB - Hobbies</li> <li>■ HH - Household</li> <li>■ OR - Organization</li> <li>■ Other relevant demographics and psychographics</li> </ul> |
| DERIVED VALUE              | Derived value of the customer as defined by the user.  |
| HOUSEHOLD                  | Household statistics and demographic information.  |

**Table 2–3 (Cont.) Customer Entity Descriptions**

| <b>Entity Name</b>               | <b>Description</b>   |
|----------------------------------|--|
| INDIVIDUAL<br>DEMOGRAPHY VALUE   | Detailed demographic information describing customers. For example age has Demography group as AGE, Attribute contains various bands and value as 15 years, which would be stored in this entity.  |
| MEMBERSHIP<br>ACCOUNT            | Membership Account details such as frequent shopper membership points.   |
| MEMBERSHIP TYPE                  | Lookup value for membership type.  |
| ORGANIZATION<br>DEMOGRAPHY VALUE | User defined statistical or demographic information about an Organization.   |
| ORGANIZATION<br>MARKET DATA      | Publicly available and statistical information regarding the customer organizations, such as DUNS number and number of employees.  |
| PREFERENCE TYPE                  | Type of preference relevant to consumer or customers.  |
| PROFILE INDIVIDUAL               | Attributes of an individual customer; that is, a customer who is an individual and not an organization.  |
| PROFILE<br>ORGANIZATION          | Attributes for a customer organization; that is, a customer who is not an individual.  |
| PROSPECT                         | An individual, collection of individuals, company, or public institution that does not currently purchase merchandise or services from the retailer, but who may in the future. A prospect has no recorded relationship with the retailer. |
| PROSPECT INDIVIDUAL              | Attributes of an individual prospect, one who is not an organization.  |
| PROSPECT<br>ORGANIZATION         | Attributes of a prospect organization.   |
| PROSPECT QUICK<br>FACTS          | Collection of Prospect related information.  |
| PROSPECT RESTRICTED<br>INFO      | Confidential information regarding the prospect, in other words, date of birth or national identifier of a customer. This table is encrypted.  |
| STATUS                           | Lookup for status reason.  |
| STATUS REASON                    | A reason why a particular Party Status Type may be assigned to a customer  |
| STATUS TYPE                      | Lookup Table for status type:<br>A - Active<br>I - Inactive<br>P - Prospective<br>U - Unmarketable (for example, deceased)   |
| VALUE MEASURE                    | User defined measures that help define the derived value of customer or prospect.  |
| VALUE TYPE                       | User defined value types that help define the derived value of a customer or prospect.   |

## Customer Cluster Item Entities

Identifies the Cluster that includes that Customer, based on the Customer's buying behavior.

Table 2–4 describes Customer Cluster Item Entities.

**Table 2–4 Customer Cluster Item Entity Descriptions**

| Entity Name                      | Description  |
|----------------------------------|--|
| ACCOUNT TYPE                     | Lookup for types of account, in other words, Installment Payment Account, Charge Account, Trade Account, Layaway Account, and Rental Account.  |
| CUSTOMER                         | An individual or organization that purchases, may purchase, or did purchase goods and or services from a retail store.   |
| CUSTOMER CLUSTER                 | Customer clusters and their descriptions. The data may come from an external source.   |
| CUSTOMER CLUSTER ITEM ASSIGNMENT | Cross references customer cluster with item.   |
| ITEM                             | A level in a product hierarchy frequently used for business analysis. An item can be a group of Stock Keeping Units (SKU)s where each SKU is the same item but varies in size, weight, color, or other attributes. Item is sometimes referred to as Article. |

## Employee Entities

An employee is an individual who works for a retail organization. The model supports an employee performing multiple roles (such as cashier, stocker, or service desk agent) in multiple locations (for example, a mall with different retail banners) on the same day with varying pay structures. The separation of role from employee enables the retailer to manage their workforce more effectively and is possible with flexible site calendars with job role assignments.

The model supports employee splits by allowing multiple employees to be responsible for a single sale. Therefore, multiple employees can share commissions and SPIFFs (Sales Performance Incentive Factor Formulas).

Labor information, such as employee training details, compensation details, and time sheet breakdown, are captured. Employees can be assigned to one or more discount groups enabling retailers to offer flexible discount policies.

Privacy protection, related to employee information, uses Oracle Encryption technology to safeguard customer data.

Figure 2–2 represents the Employee entities.

**Figure 2–2 Employee Entity Relationships**

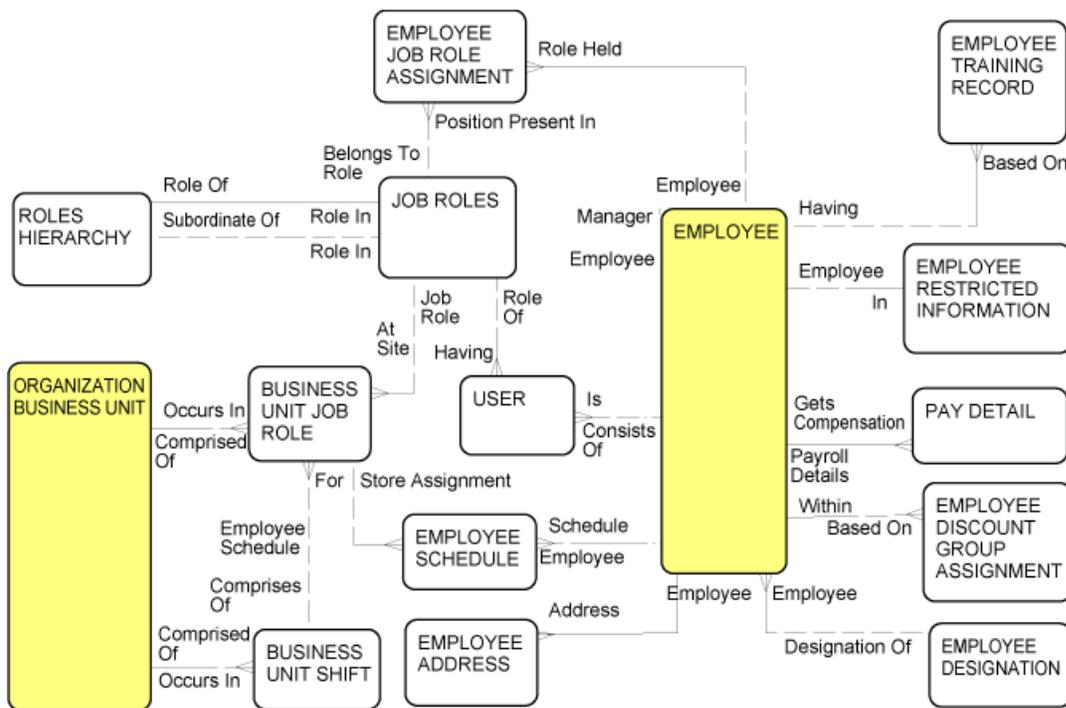


Table 2–5 describes the Employee entities.

**Table 2–5 Employee Entity Descriptions**

| Entity Name                        | Description  |
|------------------------------------|--|
| ADDRESS LOCATION                   | Address for an individual location.  |
| BUSINESS UNIT JOB ROLE             | Job role within an organization.   |
| BUSINESS UNIT SHIFT                | Work shift associated with the Business Unit, cross referenced to the Employee job roles for the allocation of these shifts.   |
| EMPLOYEE                           | An individual who works for the retail organization, accepts direction from the retail store management and satisfies the statutory criteria requiring that payroll taxes and benefit contributions be paid by the retailer. |
| EMPLOYEE ACTUAL LABOUR HOURLY      | Actual shifts in which the employee worked, cross referenced with Business Unit Shift.   |
| EMPLOYEE ACTUAL LABOUR SALARIED    | Actual labor for salaried employees.   |
| EMPLOYEE ADDRESS                   | Maps Employee table with Address Location Table. May include multiple addresses of an Employee and type of address, for example: permanent address, temporary address, rented, and others.                                   |
| EMPLOYEE DESIGNATION               | Designation (job title) of an employee.  |
| EMPLOYEE DISCOUNT GROUP ASSIGNMENT | Association between an employee and an employee discount group, which makes the employee eligible for the price reductions available to the discount group.  |

**Table 2–5 (Cont.) Employee Entity Descriptions**

| <b>Entity Name</b>              | <b>Description</b>  |
|---------------------------------|---|
| EMPLOYEE JOB ROLE ASSIGNMENT    | Cross References of the job roles present in the organization with the employees assigned to the job roles. Employees may have multiple roles.  |
| EMPLOYEE RESTRICTED INFORMATION | Confidential information regarding the employees, in other words, the date of birth or national identifier of an employee. This table is encrypted.   |
| EMPLOYEE SCHEDULE               | Planned schedule for an employee, including the store, job role, and shift for which the employee is scheduled to work.   |
| EMPLOYEE TRAINING RECORD        | Record that a particular employee has been trained in performing a particular task or skill.  |
| JOB ROLES                       | Job roles within the retail organization.   |
| ORGANIZATION BUSINESS UNIT      | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse.   |
| ORGANIZATION STORE              | Business Unit with the retail organization from where goods and merchandise are sold for personal or household consumption.   |
| ORGANIZATION JOB ROLE AT SITE   | Resource planning table identifying various shifts, job roles, and number of employees required across stores. Associates Job Roles, Organization Business Physical Site, and Organization Site Shifts.   |
| ORGANIZATION SITE SHIFTS        | Work shifts for a physical site. Mapped to Job Roles, through Organization Job Role at Site, for allocation for these shifts.   |
| PAY CATEGORY                    | Pay categories in the retail organization.  |
| PAY DETAIL                      | Payouts from payroll, in other words, compensation amount to an employee under a payroll category and type, contribution from the company toward the employee under the payroll category and type.  |
| PAY TYPE                        | Lookup for pay type.  |
| PRICE DERIVATION RULE           | Specification of a method to be used to transform the current sale unit retail amount into the retail price actually paid by a member of the employee discount group at the point of sale.  |
| ROLES HEIRARCHY                 | Hierarchy among the job roles within the retail organization.   |
| USER                            | Associative entity for Employee and Job Role. Assigns a unique ID for each job role that an employee performs at a particular store. An employee appears only once in the Employee table, but in this table, the employee appears once for each job role at each business unit. |

## Item Entities

A level in a product hierarchy frequently used for business analysis.

An item, or article, can consist of a group of Stockkeeping Units (SKUs) where each SKU Item is the same article, but each size, weight, color of the item would have a different SKU.

Figure 2–3 represents the Item entity relationships.

Figure 2-3 Item Entity Relationships

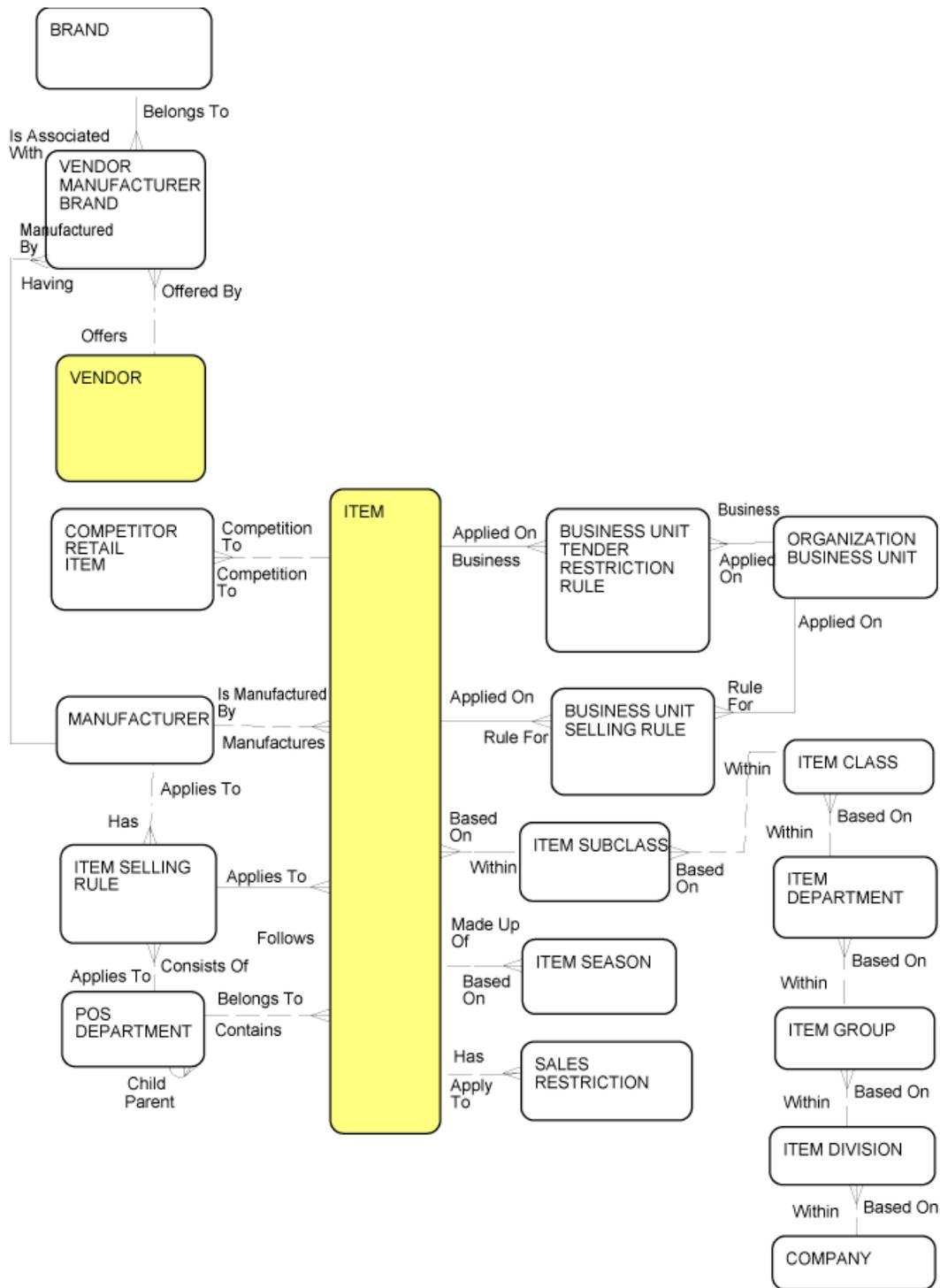


Table 2-6 describes the Item Entities.

**Table 2–6 Item Entity Descriptions**

| <b>Entity</b>                           | <b>Description</b>  |
|---|---|
| AGE RESTRICTION RULE                    | Defines a rule that restricts the sale of an Item to customers who must be of a minimum age and also the minimum age of an employee to perform a task , such as selling alcohol.  |
| ALTERNATIVE ITEM                        | A cross-reference of items that might be substituted or offered in place of another item.   |
| BRAND                                   | Selling and promotional name to identify a product for advertising and name recognition purposes.   |
| BUSINESS ENTITY SELLING RULE            | Identifies the selling rules associated with at item at a particular business entity or business unit.  |
| BUSINESS ENTITY TENDER RESTRICTION RULE | Identifies the tender classes and tenders accepted by the business entity.  |
| COMPANY                                 | Retail organization. Top level of the product and organization hierarchy.   |
| COMPETITOR RETAIL ITEM                  | A RETAIL ITEM, which is stocked by a COMPETITOR and is perceived by the customer to have no discernible difference in terms of form, fit or function -- but may be sold at a different retail price.  |
| DAY                                     | Day Level in time entity, lowest level of each type of calendar.  |
| DEPOSIT RULE                            | An association of a Stock Item and a Return Agent that defines the rules governing the deposit payment that must be paid by the customer at the time the item is purchased and the refund that must be made to the customer upon return of the item package or container. The rule is most often related to bottles, aluminum cans, crates and other containers, which must be returned for reuse or recycling. |
| DISPLAY UNIT ITEM                       | A sub-type of ITEM for shelf, rack or other display unit that is used by the store to display merchandise. Particularly used for racks and shelves custom designed for a particular item. Not normally for sale.  |
| ITEM                                    | Product, article or bundle of SKUs. For example, Item could be Acme shirt, with associated SKUs for each color and size of the shirt.   |
| ITEM CLASS                              | 5th level down in item hierarchy below item department. Item class consists of one or more item subclasses.   |
| ITEM CLUSTER                            | Grouping of items based on common characteristics.  |
| ITEM CLUSTER CUSTOMER ASSIGNMENT        | Association entity of Customer to Item Cluster based on Customer buying patterns.   |
| ITEM DEPARTMENT                         | 4th level down in item hierarchy below item group. Item department consists of one or more item classes.  |
| ITEM DIVISION                           | 2nd level down in item hierarchy below Company. Item Division consists of one or more Item Groups.  |
| ITEM GROUP                              | 3rd level down in item hierarchy, below Item Division. Item Group consists of one or more Item Departments.   |
| ITEM HIERARCHY                          | Names and descriptions for the user defined item hierarchy.   |
| ITEM HIERARCHY LEVEL                    | User defined. Hierarchy level name and description.   |
| ITEM HIERARCHY LEVEL ASSIGNMENT         | Associative entity for Product Entity and Item Hierarchy Level; maps parents to children in a hierarchy.  |

**Table 2–6 (Cont.) Item Entity Descriptions**

| <b>Entity</b>                      | <b>Description</b>   |
|------------------------------------|--|
| ITEM HIERARCHY VERSION             | Version of the hierarchy.  |
| ITEM LEVEL                         | Name and description for User Defined Item Levels.   |
| ITEM LEVEL ATTRIBUTE               | User Defined Attributes associated with an item hierarchy level.   |
| ITEM LEVEL ATTRIBUTE VALUE         | Values for User Defined Attributes of an Item Level in the user defined hierarchy.   |
| ITEM MARKET DATA                   | List of Market Items. Market items refer to the flow of goods through distribution channels authorized by the manufacturer or producer.  |
| ITEM RECLASS                       | Items closed or reclassified today. The table is deleted or inserted daily by batch modules for reclassification processing.   |
| ITEM SALES PROHIBITION PERIOD RULE | Rules restricting the sale of an item, in other words, day, time, age of customer, age of operator for alcohol sales.  |
| ITEM SEASON                        | Associative entity for Item, Season, and Phase. Maps items to seasons and phases.  |
| ITEM SELLING RULE                  | A set of commonly used selling rules for Items. The entity is typically in a one-to-one relationship with Item, unless each combination of size, color, and style of a particular piece of merchandise is individually assigned to a SKU for inventory recording purposes, but all sizes, colors, and styles of that item have the same selling rules. |
| ITEM SHELF LEVEL                   | A type of ITEM LABEL that provides a means of conveying information about a RETAIL ITEM to the CUSTOMER, EMPLOYEE, or both. The label is sited adjacent to the item, usually in front of the merchandise where the customer can easily see it.   |
| ITEM SPIFF RULE                    | Rule or condition associated with an Item applied when a Sales Performance Incentive Factor Formula (SPIFF) is awarded to a salesperson.   |
| ITEM STATE                         | Lookup for the state of the Item.  |
| ITEM SUBCLASS                      | 6th level down in item hierarchy, below Item Class. Item Subclass consists of one or more Items.   |
| ITEM SUBDEPARTMENT                 | Item SubDepartment within a Department in the Product hierarchy at a given of time.  |
| ITEM TENDER RESTRICTION GROUP      | A collection of Items which share a common restriction on the which tenders may be used to pay for them at a store.  |
| ITEM TENDER RESTRICTION RULE       | An association between Item Tender Restriction Group and Tender which constrains the use of a specific type of tender in the settlement of a sale for a specific Item.   |
| LICENCE SALES RESTRICTION          | A restriction or limitation on the sales of a class of items based on the purchaser's profession, license, or other certification.   |
| LOYALTY AWARD                      | Identifies a reward that a customer received for meeting the requirements of a promotion, in other words, a premium gift when a customer has purchased a certain amount during a promotion.  |
| MANUFACTURER                       | The external party that manufactures the ITEM.   |

**Table 2–6 (Cont.) Item Entity Descriptions**

| <b>Entity</b>                      | <b>Description</b>   |
|------------------------------------|--|
| MANUFACTURER<br>COUPON FAMILY      | A unique code assigned by the manufacturer to classify product for promotion purposes. In the ARTS model it is used to validate manufacturers' coupons.  |
| ORGANIZATION<br>BUSINESS ENTITY    | Any logical entity that is recognized as a part of the enterprise for Business Analysis and Transactions. Classification for a Business Entity can include company, operation unit, store, or warehouse.   |
| PHASE                              | Period of time within a Season.  |
| POS DEPARTMENT                     | A grouping of items with similar point of sale control and processing attributes. The entity type may also be used to control sales that are not properly identified at the item level.  |
| PRODUCT ENTITY                     | Any logical entity that is recognized as a product or item for Business Analysis and Transactions.   |
| RESTRICTION<br>VALIDATION QUESTION | Standard question asked to a Customer as part of the process of negotiating a Sales Restriction that has been placed upon a class of items.  |
| SALES RESTRICTION                  | A type of limitation that restricts the sale of a particular class of item.  |
| SEASON                             | Seasons and their attributes. Seasons are arbitrary periods of time around which some retailers organize their buying and selling patterns. Each day should fall within no more than one season.   |
| SKU ITEM CHOICE                    | Mapping from a parent group select item to item denoting a choice that may be made by the customer at the time sale for a Group Select Sale, package deal, or bill of material, in which several items are bundled under a single price, and the customer can make substitution for some items from a list of choices for the bundle.<br><br>Example: Ski Package where the customer can choose one of several SKUs, often one of several skis, poles, bindings and boots. |
| TENDER                             | Tender includes all the forms of payment that are accepted by the RETAIL STORE in settling sales and other transactions.   |
| TENDER CLASS                       | A type of tender with common characteristics.  |
| VALIDATION QUESTION<br>ASSIGNMENT  | Associates Restriction Validation Question to Sales Restriction.   |
| VENDOR                             | External source for merchandise and goods that the retail store offers or for supplies and goods that the retail organization uses.  |
| VENDOR<br>MANUFACTURER<br>BRAND    | Associative entity for Vendor, Manufacturer, and Brand.  |
| VENDOR QUICKFACTS                  | Collection of Vendor related measures.   |
| VENDOR SITE                        | Subentity of Vendor indicating the vendor location which supplies the item.  |

## Item Cluster Customer Entities

Association of clusters with customers.

Table 2–7 describes the Item Cluster Customer entities.

**Table 2–7 Item Cluster Customer Entities**

| Entity Name                         | Description  |
|-------------------------------------|--|
| CUSTOMER                            | An individual or organization that purchases, may purchase, or did purchase goods and or services from a retail store.   |
| ITEM                                | A level in a product hierarchy frequently used for business analysis. An item can be a group of Stock Keeping Units (SKU)s where each SKU is the same item but varies in size, weight, color, or other attributes. Sometimes referred to as Article. |
| ITEM CLUSTER                        | All Item clusters and their descriptions.  |
| ITEM CLUSTER<br>CUSTOMER ASSIGNMENT | Maps Item Cluster with Customer.   |

## Item Market Data Entities

Reflects the structure of the market as a whole at the product level. It allows the analyst to examine the performance of the retailer's products in the general marketplace. Understanding of the market situation allows the analyst to identify items in which the marketplace is outperforming the retailer and take corrective action.

Table 2–8 describes the Item Cluster Customer entities.

**Table 2–8 Item Market Data Descriptions**

| Entity                            | Description   |
|-----------------------------------|---|
| ITEM DEPARTMENT                   | 4th level in the item hierarchy, below item group. Item department consists of one or more item classes.  |
| ITEM MARKET DATA                  | Item in Market with descriptive information that may be purchased through external entities.  |
| MARKET ITEM DEPARTMENT            | A department or category grouping of items in the market.   |
| MARKET ITEM DEPARTMENT ASSIGNMENT | Associative entity mapping item department with market item department.   |
| POS IDENTITY                      | Lists the various means of identifying items at the point of sale including the Point of Sale (POS) and the internal stock keeping Item ID for the item. The POS Item ID is generally filled with the Global Trade Item Number (GTIN) (Universal Product Code [UPC], European Article Number [EAN], and others) for an item, but it is not mandatory. |
| SKU ITEM                          | Stock Keeping Unit or unit identification (typically the UPC) used to track store inventory and sales. Each SKU is associated with an item, variant, product line, bundle, service, fee or attachment.  |

## Location Geography Entities

Geographical descriptions and rollups based on location address.

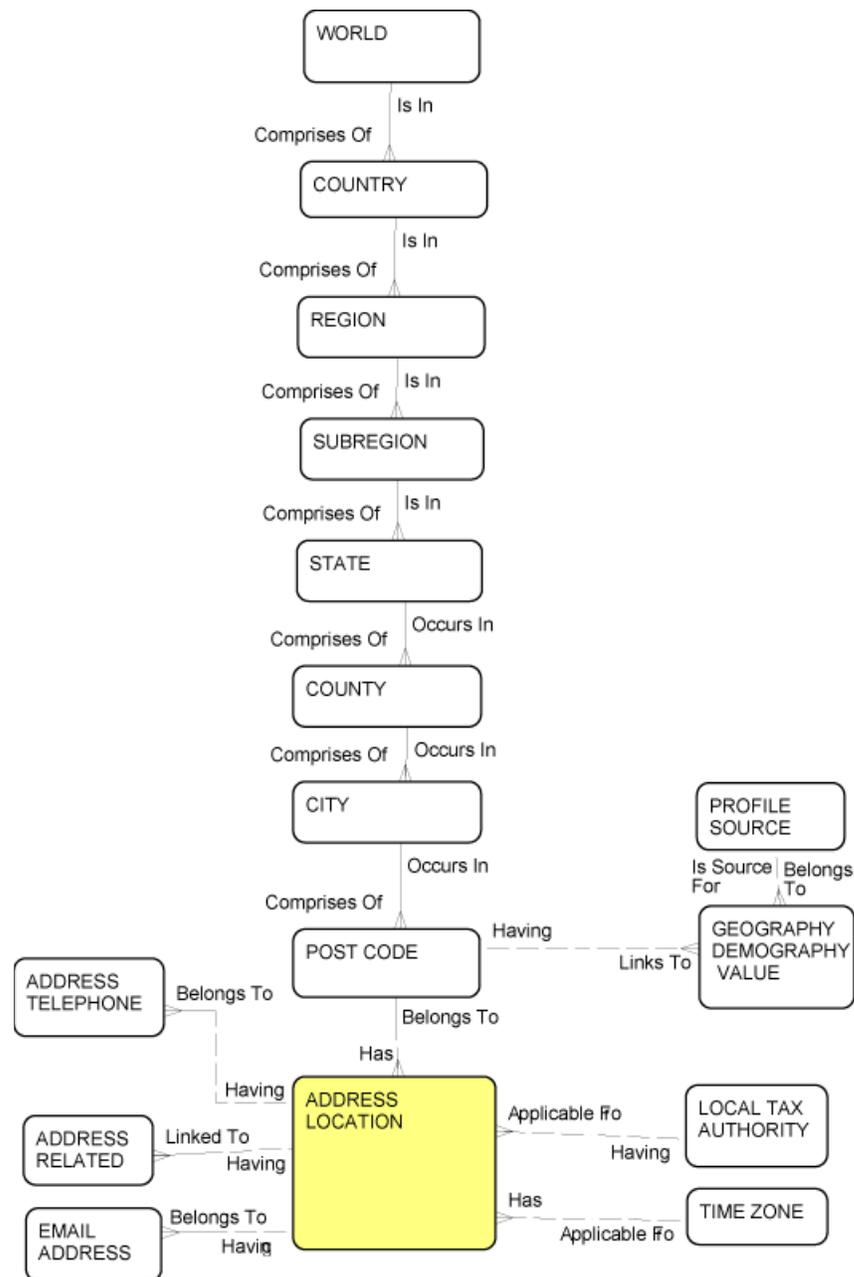
**Figure 2–4 Location Geography Entity Relationships**

Table 2–9 describes the Location Geography entities.

**Table 2–9 Location Geography Entity Descriptions**

| Entity                   | Description   |
|--------------------------|---|
| ADDRESS LOCATION         | Physical address for an individual location.  |
| ADDRESS LOCATION HISTORY | History of the names and addresses associated with a business unit, vendor, prospect, or customer.                |
| ADDRESS RELATED          | Associates one addresses with other addresses, for example, alternate address, locations with multiple addresses. |
| ADDRESS TELEPHONE        | Phone numbers associated with a specific address.   |

**Table 2–9 (Cont.) Location Geography Entity Descriptions**

| <b>Entity</b>                         | <b>Description</b>  |
|---------------------------------------|---|
| ADDRESS TYPE                          | Lookup for address types such as home, office, mobile, and warehouse.   |
| EMAIL ADDRESS                         | E-mail address associated with a Location.  |
| GEOGRAPHY DEMOGRAPHIC GROUP           | User defined classifications for Demographic attributes, such as: <ul style="list-style-type: none"> <li>■ Race</li> <li>■ Age</li> <li>■ Income</li> </ul>   |
| GEOGRAPHY DEMOGRAPHY ATTRIBUTE        | User defined classifications for a demographic profile group, for example: <ul style="list-style-type: none"> <li>■ Percent White</li> <li>■ Percent Black</li> <li>■ Average Age</li> <li>■ Average Income</li> <li>■ Population</li> <li>■ Population Age 0-12</li> </ul> |
| GEOGRAPHY DEMOGRAPHY VALUE            | Values associated with a geographic location as defined by the Geography Demography Attribute.  |
| GEOGRAPHY ENTITY                      | Geographic entities that can be used to define the location of an address. Examples include, Region, North, State, Country, City, Geography, EMEA, Americas, and others.  |
| GEOGRAPHY HIERARCHY                   | Type of geographic hierarchy, in other words, Sales Hierarchy, Organization Location Hierarchy, and others.   |
| GEOGRAPHY HIERARCHY LEVEL             | Associative entity for Geography Hierarchy and Geography Levels, mapping levels to hierarchies.   |
| GEOGRAPHY HIERARCHY LEVELS ASSIGNMENT | Associative entity for Geography Hierarchy Level and Geography Entities; assigns geography values to hierarchy levels.  |
| GEOGRAPHY HIERARCHY VERSION           | Version table for the hierarchies.  |
| GEOGRAPHY LEVEL                       | User defined Hierarchical levels for the geographic hierarchies.  |
| GEOGRAPHY LEVEL ATTRIBUTES            | User defined attributes associated with a specific geographical level.  |
| GEOGRAPHY LEVEL ATTRIBUTE VALUE       | Values as defined by geography level attributes for a geography hierarchy level.  |
| LOCAL AUTHORITY TYPE                  | Lookup for type of Local Authority. Examples include city, state, and county.   |
| LOCAL TAX AUTHORITY                   | Government authority that levies sales taxes or imposes rules or statutory compliances.   |
| POST CODE                             | Postal codes and associative demographic information of interest to the Retail Organization.  |
| PROFILE SOURCE                        | Source from which a Profile is acquired or populated, in other words, a mailing list provider.  |
| STATUS                                | Lookup for status.  |
| TIME ZONE                             | Time zone relative to Greenwich Mean Time (GMT).  |

## Media Entities

Media for communicating promotion and marketing efforts of the organization.

[Table 2–10](#) describes the Media entities.

**Table 2–10 Media Entity Descriptions**

| Entity             | Description  |
|--------------------|--|
| COMMUNICATION TYPE | Lookup for Type of communication; examples include, vocal, pictorial, broadcast, written.  |
| MEDIA              | Mass communication medium, such as New York Times, Boston Globe, CNN, BBC and others). Promotions are communicated through Media.              |
| MEDIA TYPE         | Lookup for the media type used to communicate with the customer. Examples include catalog, internet, postcard, TV, radio, newspaper, and list. |

## Organization Entities

An Organization is a company, association, institution, or other enterprise of interest to a retail enterprise. Each organization can use a business unit specific calendar.

In addition to the named organization business unit hierarchy, the model supports defining custom hierarchy(ies), custom level(s), assignment of level to multiple hierarchy(ies), custom defined attributes for each hierarchy and level, thereby providing the retailer the most flexibility in organization assignment.

A business unit can be modeled as a sales channel, a distribution center, or both; a store, warehouse, web-store, catalog, or tele-store (infomercial). Touch points can include workstation (with units and related attributes), Call center (with job role and link to employee), or both.

Market Area (a geographic area with syndicated data) and its Level enables a retailer to locate a new store, DC, or Warehouse. Methods to define the Market Area include the study of traffic flow, use of a retail gravity model, zip code method, or commuting data.

Trade area indicates where a retailer operates and can be primary, secondary or tertiary. Trade area may not be related to geographical area. It provides a mechanism to map market area data to a specific store, because census block (or whatever is used to store market area data) does not map to the geographic area that the store serves.

Support for syndicated data for demography aids the Organization in customer analysis using Dunn & Bradstreet or ABI. Non-syndicated data are captured through flexible and generic demographic group and related entities. Environmental conditions related to business units are also captured.

Retailer's spatial analytic needs GMROS (Gross Margin Return on Space) and SQUINCH (Square Inch analysis - typical for Direct Marketing) are supported using rich attributes for Inventory Location and Selling Locations, including x-y-z coordinates, shapes and sizes, and bills of material.

Direct retailers can analyze web page and catalog layouts with depictions, inventory location, and depiction locations.

Store-based retailers can indicate shifts and job roles appropriate to their locations with varying assignments.

[Figure 2–5](#) represents the Organization entity relationships.

**Figure 2-5 Organization Entity Relationships**

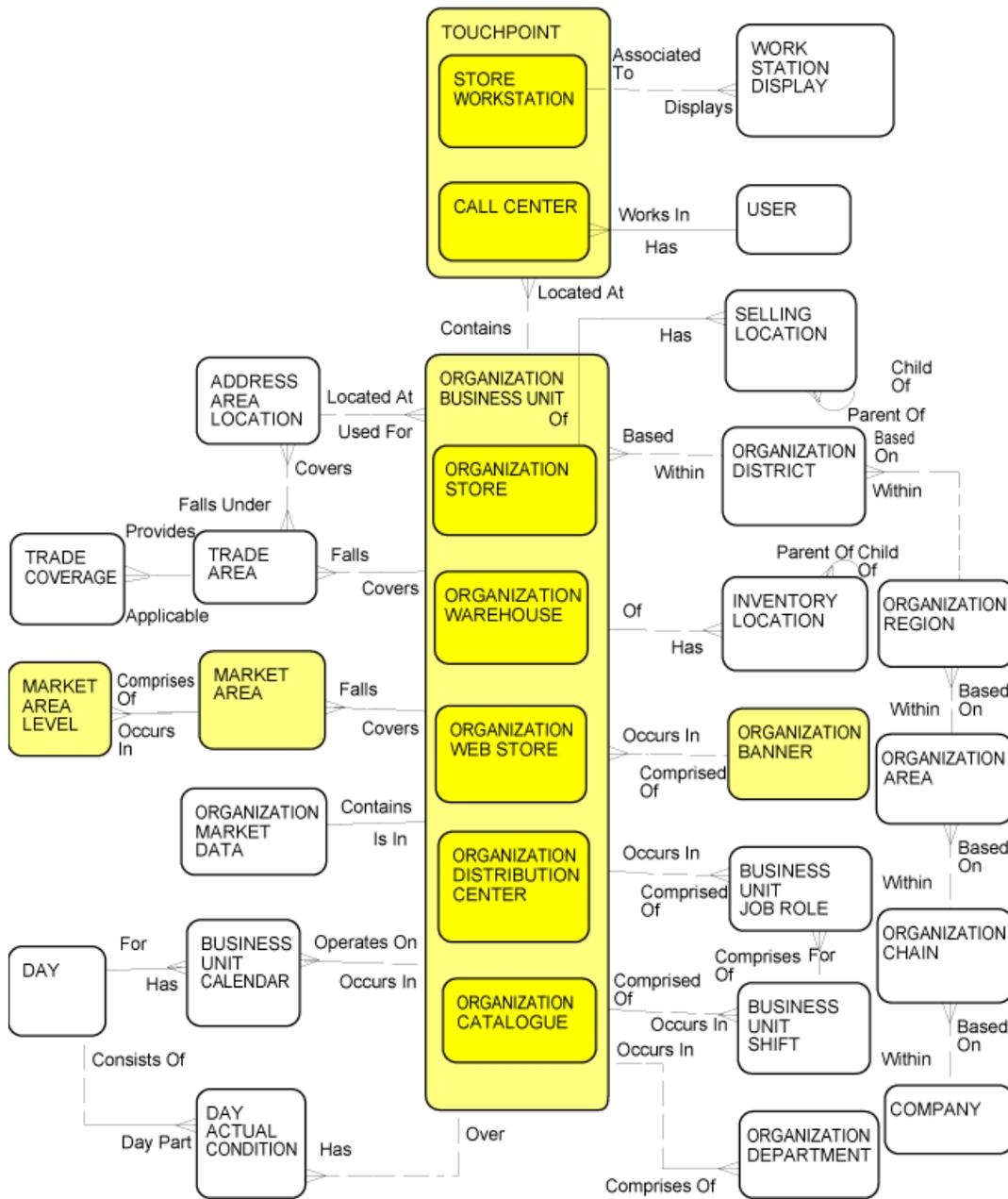


Table 2-11 describes the Item Organization entities.

**Table 2-11 Organization Entity Description**

| Entity                 | Description  |
|------------------------|--|
| ADDRESS LOCATION       | Addresses of a physical location.  |
| BUSINESS UNIT CALENDAR | Operating Calendar for the Business Unit, allocated for each day of the year.  |
| BUSINESS UNIT JOB ROLE | Job roles within the retail organization.                                      |
| BUSINESS UNIT TYPE     | Lookup for business unit types such as Store, Warehouse, Catalogue and others. |

**Table 2–11 (Cont.) Organization Entity Description**

| <b>Entity</b>            | <b>Description</b>   |
|--------------------------|--|
| BUSINESS UNIT SHIFT      | Work shift associated with the Business Unit, associated with Employee job roles for the allocation for these shifts.  |
| BUSINESS UNIT USAGE TYPE | Possible values for the site usage are: <ul style="list-style-type: none"> <li>■ Store</li> <li>■ Store within a Store (Quick Serve, Dry Cleaning, Bank, ATM, Hair Salon, Parcel Service, Wireless Provider)</li> <li>■ Department (Pharmacy, Film, Optician, Nursery, Cosmetics, Gift Registry, Customer Service, Returns counter, Pickup Counter, Drive-through)</li> <li>■ Kiosk (Cart, Video, Stationary)</li> <li>■ Vending machine</li> <li>■ Warehouse</li> <li>■ Distribution Center</li> <li>■ Call Center</li> <li>■ Administrative</li> </ul> |
| CALL CENTER              | A unit within an organization or a third-party organization that handles telephone sales, services, or both.   |
| CHANNEL TYPE             | Lookup for channel types; for example, selling, distribution, and others.  |
| COMPANY                  | Retail Organization. Top level of the product and organization hierarchy.  |
| DAY                      | Day Level in time entity, lowest level of each type of calendar.   |
| DAY ACTUAL CONDITION     | User defined condition describing phenomenon that may have affected sales on a particular day at a business unit. Phenomenon could include strike, construction, rain, or snow.  |
| EMPLOYEE                 | An individual who works for the retail organization, accepts direction from the retail store management and satisfies the statutory criteria requiring that payroll taxes and benefit contributions be paid by the retailer.   |
| INVENTORY LOCATION       | Physical location where the retailer stores merchandise. Inventory Location may be co-located at a Site with Retail Store, Distribution Center, or Administrative Center and does not include containers, ships and trucks that are in transit.  |
| LOCATION TYPE            | Lookup for location types of a given site, in other words, Free-standing (Isolated retail location not connected to other retailers), Central Business District (CBD) (Corner location, Center location), Secondary Business District (SBD)-Street (Corner location, Center location), Neighborhood Business District (NBD)-Street (Corner location, Center location), Shopping Center (Strip centers, Malls), and Other (Airport, Hotel, Hospital, Resort, Store-within-store, Entertainment or Recreation).  |
| MARKET AREA              | A geographic area for which resident geographic data is available. Market Area may or may not contain a store.   |
| MARKET AREA LEVEL        | Level of classification inside the market areas based on, Community, Geography or user defined criteria.   |
| ORGANIZATION AREA        | Organization Hierarchy Level within an organization chain and is the parent of one or more Organization Regions.   |

**Table 2–11 (Cont.) Organization Entity Description**

| <b>Entity</b>                    | <b>Description</b>   |
|----------------------------------|--|
| ORGANIZATION BANNER              | The name of a retail company's subsidiary that is recognizable to the consumer or the name of the store as it appears on the catalog, web channel or brick and mortar store.   |
| ORGANIZATION BUSINESS ENTITY     | Any logical entity that is recognized as a part of the enterprise for Business Analysis and Transactions. Classification for a Business Entity can include company, operation unit, store, warehouse and others.   |
| ORGANIZATION BUSINESS UNIT       | <p>Business unit at the lowest level of the retail organization where business is conducted; in other words, store, distribution center, warehouse, web-store or catalogue.</p> <ul style="list-style-type: none"> <li>■ Organization Store: Fixed location from where goods and merchandise are sold for personal or household consumption.</li> <li>■ Organization Warehouse: A place in which goods or merchandise are stored; a storehouse.</li> <li>■ Organization Distribution Center: A distribution center for a set of products is a warehouse or other specialized building with refrigeration or air conditioning that are supplied by transport, such as aircraft, truck, rail or ship, and then re-distributed to stores or warehouses.</li> <li>■ Organization Catalog: A publication, such as a book or pamphlet, containing list or itemized display of titles, or articles for exhibition or sale, usually including descriptive information or illustrations. For example, a catalog of fall fashions, or a seed catalog.</li> </ul> |
| ORGANIZATION CATALOG             | Publication, such as a book or pamphlet, containing list or itemized display of titles, or articles for exhibition or sale, usually including descriptive information or illustrations. For example, a catalog of fall fashions; a seed catalog.   |
| ORGANIZATION CHAIN               | Chain is the 2nd highest level within the organization hierarchy below company. A chain consists of one or more areas.   |
| ORGANIZATION DEMOGRAPHY VALUE    | <p>Stores the Demographic information associated with the Business unit, as defined by the user defined demography groups and attributes. Examples:</p> <ul style="list-style-type: none"> <li>■ Start date of Organization</li> <li>■ Revenue band-Profit band</li> <li>■ Product or Service Category</li> <li>■ Head count</li> <li>■ Number of offices or sites</li> </ul>  |
| ORGANIZATION DEPARTMENT          | A specialized section within a business unit.  |
| ORGANIZATION DISTRICT            | District is the 5th highest attribute within the organization hierarchy, below Region. A district consists of one or business units.   |
| ORGANIZATION DISTRIBUTION CENTER | A distribution center for a set of products or a warehouse or other specialized building with refrigeration or air conditioning, which are supplied by transport, such as aircraft, truck, rail or ship, and then re-distributed to retailers or wholesalers.  |
| ORGANIZATION HIERARCHY           | User defined. Master list of all of the hierarchies in an organization.  |

**Table 2–11 (Cont.) Organization Entity Description**

| <b>Entity</b>                           | <b>Description</b>  |
|---|---|
| ORGANIZATION HIERARCHY LEVEL            | Association table for the hierarchies and levels.   |
| ORGANIZATION HIERARCHY LEVEL ASSIGNMENT | Assignment table for Hierarchy levels to the Business Entities.   |
| ORGANIZATION HIERARCHY VERSION          | Version table for hierarchies.  |
| ORGANIZATION LEVEL                      | List of all the business levels within an organization.   |
| ORGANIZATION LEVEL ATTRIBUTES           | User defined. Attributes applicable only to the corresponding level in the organization, in other words, Regional Language.   |
| ORGANIZATION LEVEL ATTRIBUTE VALUE      | Values for the user defined attributes associated with an organization hierarchy level.   |
| ORGANIZATION MARKET DATA                | Publicly available and statistical information regarding the customer organizations, such as DUNS number and number of employees.   |
| ORGANIZATION REGION                     | Region is the 4th highest attribute within the organization hierarchy, below Area. A region consists of one or more districts.  |
| ORGANIZATION STORE                      | Fixed location from where goods and merchandise are sold for personal or household consumption.   |
| ORGANIZATION WAREHOUSE                  | Location in which goods or merchandise are stored but not sold.   |
| ORGANIZATION WEBSTORE                   | A Web site owned or commissioned by the organization from where goods and merchandise are sold for personal or household consumption.   |
| SELLING LOCATION                        | An area of floor space or shelf space within the Retail Store to which sales can be assigned. Selling Location may be assigned to or rented by a Vendor.  |
| SELLING LOCATION TYPE                   | Lookup for selling location types, in other words, Shelf, Floor, Rack and others.   |
| STORE WORKSTATION                       | Device used as an Interface to any retail business function, for example, the capture and storage of TRANSACTIONS and operational performance reporting. Usually a cash register.   |
| TOUCHPOINT                              | Place from where transactions take place. Meeting point for customer and retail organization. Touchpoint can be both logical and physical. <ul style="list-style-type: none"> <li>▪ Call Center: A department within a retail organization or a third-party organization that handles telephone sales service.</li> <li>▪ Store Workstation: A device used as an as interface to any retail business function, for example, the capture and storage of TRANSACTIONS and operational performance reporting.</li> </ul> |
| TRADE AREA                              | Geographic region from which a store draws most of its retail customers. Can be defined by distance, drive time, or other factors.  |
| TRADE AREA COVERAGE                     | Demographic and accessibility data for a given trade area.  |

**Table 2–11 (Cont.) Organization Entity Description**

| Entity               | Description  |
|----------------------|--|
| USER                 | Associative entity for Employee, Job Role; associates a unique ID for every job role that an employee performs at a particular business unit. An employee appears only once in the Employee table, but in USER table, the employee appears once for each job role at each business unit. |
| WORK STATION DISPLAY | Physical display for Items near the workstation, usually intended for impulse purchases such as magazines, candy, gift cards, and calendars.   |

## Product Entities

The product hierarchy represents the product line that the company sells. Retailers must understand their products when making crucial decisions about what items to buy, where to stock them, and how to sell them to customers. The product hierarchy makes it possible for analysts to measure performance at any level represented in the product hierarchy.

The product hierarchy is essential to the category or department manager who must know what items turn the highest profit, or how an item performs within the market as a whole.

Due to its importance for analysis in the retail environment, attributes from the product hierarchy are present in nearly every fact table. In most cases, data is kept at the lowest level in the hierarchy (SKU item) to allow maximum flexibility and detail in reporting.

## Promotion Entities

Promotion reflects the tactics a retailer undertakes to generate increased incremental sales volume for specific item-store combinations within a promotional event. Promotions are frequently communicated as part of a marketing campaign to ensure that awareness is generated with the target audience.

[Figure 2–6](#) represents Promotion entity relationships.

Figure 2-6 Promotion Entity Relationships

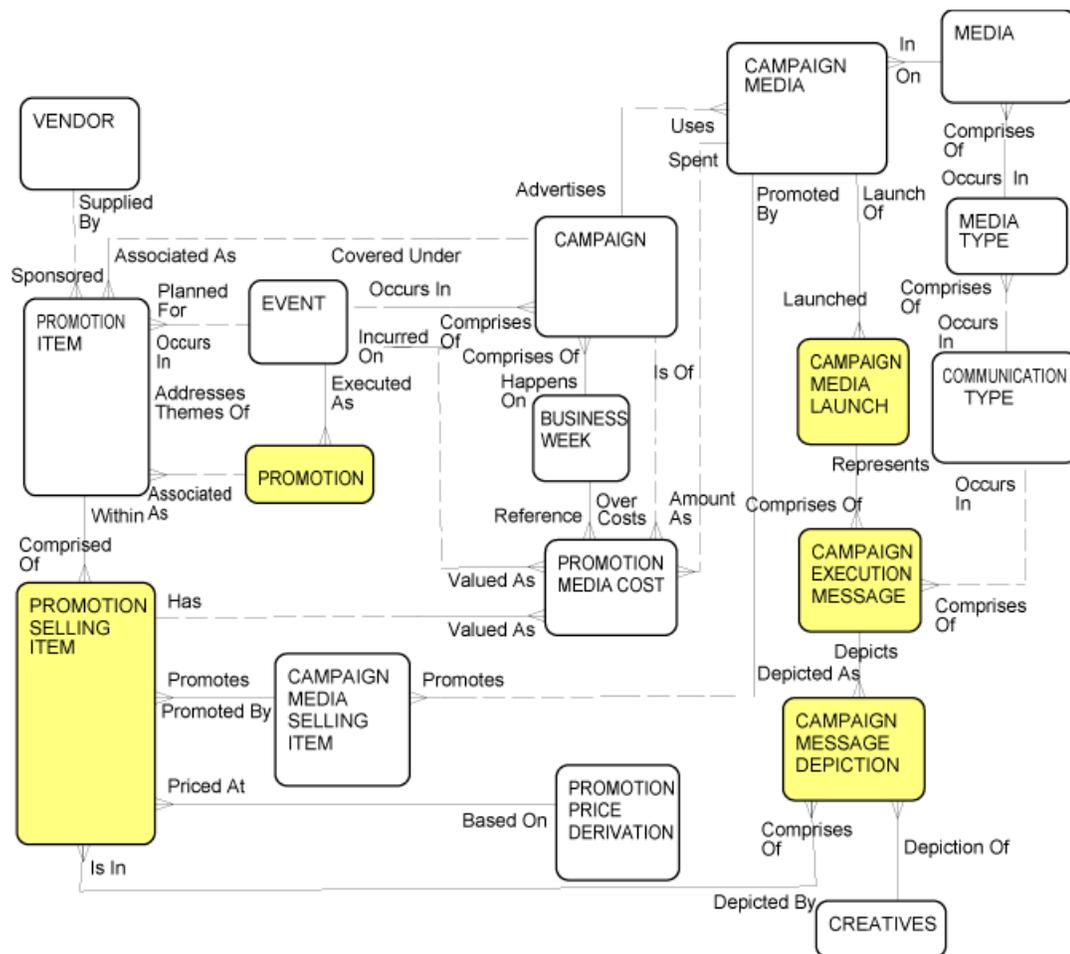


Figure 2-12 describes Promotion Entities.

Table 2-12 Promotion Entity Descriptions

| Entity                       | Description  |
|------------------------------|--|
| BUSINESS WEEK                | Information relating to a week in a Business Calendar.   |
| CAMPAIGN                     | Entire communication strategy for a specific marketing communications program. The marketing communications program is frequently in support of promotional events and individual promotions but can be standalone. Retailers execute several different types of campaigns, including advertising, direct marketing and in-store marketing. There are several sub-types within each category as well. Advertising includes (1) traditional broadcast, (2) direct response and (3) online. Direct marketing includes (1) individually tracked and (2) summary tracking. In-store includes (1) broadcast and (2) 1:1. The 1:1 is usually performed in call centers or on Web sites. Each campaign consists of 1 to n communications, which is the lowest level of the campaign object. |
| CAMPAIGN COST                | Costs associated with a campaign.  |
| CAMPAIGN CUSTOMER ASSIGNMENT | Assignment entity among Campaign Execution message, Customer, Campaign Message Rendering.  |

**Table 2–12 (Cont.) Promotion Entity Descriptions**

| <b>Entity</b>                   | <b>Description</b>  |
|---------------------------------|---|
| CAMPAIGN EXECUTION MESSAGE      | Information regarding the message costs for a media campaign.   |
| CAMPAIGN MEDIA                  | Media associated with the campaign.   |
| CAMPAIGN MEDIA LAUNCH           | Details about how a campaign is carried out.  |
| CAMPAIGN MEDIA SELLING ITEM     | Items presented to customer or public as part of the campaign.  |
| CAMPAIGN MESSAGE DEPICTION      | Information regarding the depiction of a campaign message within the media.   |
| CAMPAIGN MESSAGE RENDERING      | Details about how the campaign message was rendered, broadcast or distributed in the media and associated costs. <ul style="list-style-type: none"> <li>■ Cost: Cost of Media.</li> <li>■ Target: Anticipated recipients of the campaign message</li> </ul> |
| CAMPAIGN TARGET                 | Sub entity of Campaign Customer Assignment indicating the target audience for a campaign.   |
| COMMUNICATION TYPE              | Lookup for Type of communication; examples include, vocal, pictorial, broadcast, written.   |
| COST                            | Sub entity of Campaign Message Rendering containing the variable costs of each message communication.   |
| CREATIVES                       | Creative content of the message. Examples include photos, writing, drawings, or recordings. Points to a file location where the creatives are stored.   |
| CUSTOMER                        | An individual or organization that purchases, may purchase, or did purchase goods and or services from a retail organization.   |
| EVENT                           | Something that takes place or has been planned represented by the designation of time, place and purpose.   |
| GEOGRAPHIC ENTITY               | Describes various physical geography entities that can be created. For example, Geographic Entities could be Sales Region North, State, country city, geography, EMEA, Americas or others.  |
| MEDIA                           | Mass communication medium, such as New York Times, Boston Globe, CNN, BBC and others). Promotions are communicated through Media.   |
| MEDIA DEPICTION ITEM ASSIGNMENT | Associative entity linking Campaign Message Depiction with Promotion Selling Item.  |
| MEDIA TYPE                      | Description of Media Type. Examples include TV, radio, newspaper, and list.   |
| ORGANIZATION BUSINESS ENTITY    | Any logical entity that is recognized as a part of the enterprise for Business Analysis and Transactions. Classification for a Business Entity can include company, operation unit, store, warehouse and others.  |
| PROMOTION                       | A collection of eligibilities and price derivation rules, during a specific time group.   |
| PROMOTION ITEM                  | Associative entity connecting any level of the item hierarchy and organization hierarchy, and optionally a vendor, with the promotion.  |
| PROMOTION MEDIA COST            | Plan and forecast costs for a campaign media.   |

**Table 2–12 (Cont.) Promotion Entity Descriptions**

| <b>Entity</b>              | <b>Description</b>  |
|----------------------------|---|
| PROMOTION PRICE DERIVATION | Rules for which sale prices to use for the promotion selling item.  |
| PROMOTION SELLING ITEM     | Associative entity linking promotion item and campaign media selling item, and the prices which may be used for the item during the promotional period. |
| TARGET                     | A defined group at which the promotion is aimed.  |
| VENDOR                     | External source for merchandise and goods that the retail store offers or for supplies and goods that the retail organization uses.                     |

## SKU Item Entities

SKU Item is the lowest level of merchandise for which inventory and sales records are retained within the retail organization business unit.

The model supports the following item types:

- Stock Item
- Service Item
- Prepared Item
- Aggregate Item
- Collection Item
- Substitution Item
- Group Select Item

The model includes information specific to the item type including Base, Net and Landed Cost, a models Construction for 'Service Item', Item Choice for 'Group Select' and Bill-of-Materials (BOM) for Collection Item with Member Item's contribution there by supporting a Pack versus Standalone Item Contribution Analysis.

It supports a simple cross-reference between the barcode, point of sale scan code or other keyed identifying number used at POS and the internal stock keeping unit (SKU) for the item. These identifiers are generally filled with the GTIN (UPC or EAN) for an item, but this is not required. A retailer may develop and maintain its own set of POS identifiers.

In addition to supporting item attributes such as Size, Style, Flavor, Color, Fabric, Fiber, and Coating, the model supports a flexible and generic way to define variety group and related entities that can capture other interesting attributes that are implementation specific

The model provides a set of prices that are applied to an Item, which can be maintained at generic level or at business unit level including its hierarchy. It has been designed to collect the "item price" file with the highest performance, while maintaining the price history and confidentiality.

The model provides a simple cross-reference between a SKU Item identified and managed internally by the retail store and a Vendor Item with the intent of providing a cross reference between the internal and supplier view of a SKU. It provides rule for Retail Sale Unit Count Conversion and UOM that help in exploding a higher level material receiving unit into a lower level. For example a pallet may be exploded into 24 cases and each case may be exploded into 24 retail sale units.

The model supports inventory rules that allows retailer to specify maximum and minimum inventory on hand.

[Figure 2-7](#) shows the relationships of the SKU Item entities.



**Table 2–13 SKU Item Entity Descriptions**

| <b>Entity</b>              | <b>Description</b>  |
|----------------------------|---|
| AGGREGATE SKU              | Sub-type of SKU that is an aggregation of one or more constituent SKUs. The constituent items could also be sold individually.  |
| COATING                    | Lookup entity for SKU Item attribute Coating.   |
| COLOR                      | Lookup table for SKU Item attribute Color.  |
| DYE                        | Lookup entity for SKU Item attribute Dye.   |
| FABRIC                     | Lookup entity for SKU Item attribute Fabric.  |
| FIBER                      | Lookup entity for SKU Item attribute Fiber.   |
| GROUP SELECT               | SKU item that is part of a group of SKU items, only one of which is sold. The choice of which item is made by the customer at the time of purchase.   |
| ITEM                       | A level in a product hierarchy frequently used for business analysis. An item can be a group of Stock Keeping Units (SKU)s where each SKU is the same item but varies in size, weight, color, or other attributes. Sometimes referred to as Article.  |
| ITEM SEASON                | Associative entity for Item, Season, and Phase. Maps items to seasons and phases.   |
| ORGANIZATION BUSINESS UNIT | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse.   |
| POS IDENTITY               | A simple cross-reference between the barcode, point of sale scan code or other keyed identifying number used at the Point of Sale (POS) and the internal stock keeping Item ID for the item. The POS Item ID is typically filled with the Global Trade Item Number (GTIN) (Universal Product Code [UPC], European Article Number [EAN], and others) for an item, but it is not mandatory. A retailer may develop and maintain its own set of POS identifiers. |
| PREPARED                   | Sub-type of SKU Item for which the final product is manufactured (or prepared) for sale by the retailer according to a pre-defined Recipe.  |
| SERVICE SKU                | SKU that provides a detailed identifier and description for a service offered for sale to a customer by the retail organization. Service SKU also identifies and describes rental items and other tangible items used by customers for a contracted period, but not purchased.  |
| SERVICE TERM               | The terms and conditions that apply to the provision of any services either by the retail Organization or by arrangement through a third party. The terms and conditions are normally listed in a separate document, which the customer is requested to sign as acceptance of these terms.  |
| SIZE                       | Lookup entity for the SKU Item attribute Size   |
| SIZE TYPE                  | Lookup for type of size. For example, shoes, clothing, or package dimension.  |

**Table 2–13 (Cont.) SKU Item Entity Descriptions**

| <b>Entity</b>                          | <b>Description</b>   |
|--|--|
| SKU ITEM                               | <p>Stock Keeping Unit or unit identification (typically the UPC) used to track store inventory and sales. Each SKU is associated with an item, variant, product line, bundle, service, fee or attachment.</p> <ul style="list-style-type: none"> <li>▪ Aggregate SKU: Subtype of SKU that is an aggregation of one or more constituent SKU. The constituent items may be sold individually.</li> <li>▪ Group Select: An item, which is a group of items, only one of which is sold. The choice of which item is made by the customer at the POS.</li> <li>▪ Prepared: A sub-type of SKU Item that is manufactured (or prepared) for sale from a set of Bulk Item with a Recipe. A Prepared SKU Item is different from Stock Item because Prepared Item is not booked into inventory when the item is manufactured; nor is it removed from inventory when it is sold; rather the inventory for the Bulk Item constituent parts as defined by the recipe is reduced when the Prepared Item is sold.</li> <li>▪ Service SKU: A type of SKU that provides a detailed identifier and description for a service offered for a sale to customer in the retail store. Service SKU also identifies and describes rental items and other tangible items that are used by customer for a contracted period, but not purchased.</li> <li>▪ Stock: A unit of merchandise that may be sold to a customer or used by the RETAIL STORE.</li> </ul> |
| SKU ITEM BUSINESS UNIT INVENTORY RULES | Associative entity for Business Unit, SKU Item and Vendor that defines the inventory rules for the vendor item at the business unit.   |
| SKU ITEM BUSINESS UNIT SELLING PRICE   | SKU Item Selling Price related to a business unit.   |
| SKU ITEM CHOICE                        | A mapping from a parent Group Select Item to Item denoting a choice that may be made by the customer at the time of sale for a Group Select sale, package deal, or bill of material, in which several items are bundled under a single price, and the customer can make substitutions for some items from a list of choices for the bundle.  |
| SKU ITEM COLLECTION                    | An optional relationship between a SKU item and its components and affiliates where the components consist of other SKU ITEMS.   |
| SKU ITEM CONSTRUCTION                  | The terms and conditions that apply to the provision of any services either by the retail organization or by arrangement through a third party. The terms and conditions are normally listed in a separate document which the customer is requested to sign as acceptance of these terms.  |
| SKU ITEM SELLING PRICE                 | The set of prices that re applied to a SKU Item.   |
| SKU ITEM PRICE HISTORY                 | Historical archive of the retail selling unit price at which a given SKU Item was actually sold at POS, net of markdowns, markups and other changes that modify the cumulative mark on for an SKU Item.  |
| SKU ITEM SHELF ATTRIBUTE               | Shelf requirements for a SKU item.   |
| SKU ITEM STYLE                         | Lookup entity for SKU Item attribute Style.  |

**Table 2–13 (Cont.) SKU Item Entity Descriptions**

| <b>Entity</b>                        | <b>Description</b>  |
|--------------------------------------|---|
| SKU ITEM SUBSTITUTION                | A 3-way join of SKU Item, SKU Item Collection and Substitute SKU Item indicating the Substitute SKU could have replaced a member SKU in the SKU Item Collection, and subsequent quantity and price adjustment.                    |
| SKU ITEM TYPE                        | Lookup for metadata denoting the type of SKU item being sold (or returned) in the line item Values: Stock, Service, Fee, Deposit, Deposit Refund, Tare, Swatch, Component, Raw, Prepared, Group Select, and Aggregate.            |
| SKU ITEM VARIETY ASSIGNMENT          | User Defined SKU Item attributes other than size, weight, and style, such as color, associated with the SKU Item. Can have multiple varieties for an SKU Item.  |
| UNIT OF MEASURE                      | Identifies and describes valid units of measure that are used throughout.   |
| SKU ITEM WEIGHT                      | Look up entity for the SKU Item Attribute Weight.   |
| STOCK                                | Unit of merchandise sold to a customer or used by the Retail Store.<br>Examples include: <ul style="list-style-type: none"> <li>■ Display Unit Item</li> <li>■ Shelf Item</li> <li>■ Apparel Item</li> <li>■ Bulk Item</li> </ul> |
| STOCK ITEM TYPE                      | Lookup for types of Stock Item.   |
| TAX EXEMPT CODE                      | A code to denote the tax exemption status from sales and use tax.   |
| VARIETY                              | User Defined Item attribute other than size, weight, and style, such as color.  |
| VARIETY TYPE                         | Lookup for variety types; for example, shape.   |
| VENDOR                               | External source for merchandise and goods that the retail store offers or for supplies and goods that the retail organization uses.   |
| VENDOR ITEM                          | Items supplied by the vendor with vendor-specific item and provides the vendor-specific attributes of the item. Provides the vendor's view of the item and uses the vendor's descriptions of item attributes.                     |
| VENDOR ITEM BUSINESS UNIT ASSIGNMENT | Defines the Vendor Items supplied to a Business Unit.   |
| VENDOR ITEM SKU ASSIGNMENT           | Associative entity defining the relationship between vendor item and SKU item.  |
| VENDOR SKU BUSINESS UNIT ASSIGNMENT  | Associative entity defining the relationship between vendor, SKU Item, and Business Unit.   |
| WEAVE                                | Lookup entity for SKU Item Attribute Weave.   |

## SKU Item Business Unit Selling Price Assignment Entities

Provides for variations in SKU selling price for business unit and item state. The following table describes the SKU Item Business Unit Selling Price Assignment.

[Table 2–14](#) describes the SKU Item Business Unit Selling Price Assignment Entities.

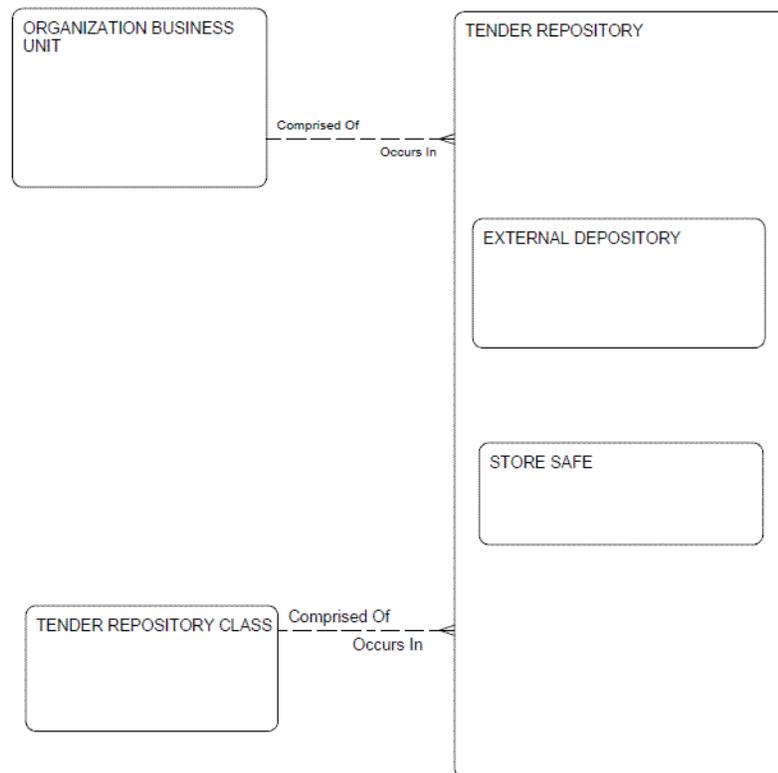
**Table 2–14 SKU Business Unit Selling Price Assignment**

| <b>Entity</b>                        | <b>Description</b>   |
|--------------------------------------|--|
| ITEM SELLING RULE                    | A set of commonly used selling rules for Items. The entity is typically in a one-to-one relationship with Item, unless each combination of size, color, and style of a particular piece of merchandise is individually assigned to a SKU for inventory recording purposes, but all sizes, colors, and styles of that item have the same selling rules. |
| ITEM STATE                           | This code defines the current state of an item within the retail store. An items state limits what actions may be taken on an item in terms of ordering, receiving, selling, returns, transfers, and counting. Example statuses include active, inactive, discontinued, and pending.   |
| ORGANIZATION BUSINESS ENTITY         | Any logical entity that is recognized as a part of the enterprise for Business Analysis and Transactions. Classification for a Business Entity can include company, operation unit, store, warehouse and others.   |
| ORGANIZATION BUSINESS UNIT           | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse.  |
| SELLING STATUS                       | Lookup for the selling status of the item. For example, active, discontinued, seasonal, to be discontinued, held for future release and others.  |
| SKU ITEM                             | Stock Keeping Unit or unit identification (typically the UPC) used to track store inventory and sales. Each SKU is associated with an item, variant, product line, bundle, service, fee or attachment.   |
| SKU ITEM BUSINESS UNIT SELLING PRICE | SKU Item Selling Price related to a business unit.   |
| SKU ITEM SELLING PRICE               | The set of prices that are applied to an SKU Item.   |
| TAXABLE GROUP                        | A group of Items for which a Tax Authority defines Tax Group Rules.  |

## Tendor Repository Entities

The Tendor Repository entities are types of physical tender containers used in the retail enterprise. Examples include: assets like, store safe(s) or tills.

[Figure 2–8](#) represents Tender Repository relationships.

**Figure 2–8 Tender Repository Relationships**

## Time Entities

The time hierarchies play a central role in the data warehouse because the Business questions in a retail environment, as in any other, are almost invariably time based.

Oracle Retail Data Model provides multiple calendars, all based on the Day entity. These include Calendar (Gregorian), Business, Fiscal, Advertising, and Planning. Time-based performance comparisons are an important part of decision support in retailing. For example, a user might want to assess sales performance for a current month or season by comparing the sales performance to the same month or season for the previous year. The time hierarchies allow the transformations required to support time-based comparisons to take place.

Time intervals are based on the 4-5-4 calendar or a thirteen-period calendar. The calendar can be implemented as 4-5-4, 4-4-5, or 5-4-4, depending upon the needs of the retail organization analyst. In addition, the retail organization determines the weekday on which a week begins and ends. Every quarter contains thirteen full weeks. Quarters have a four week month, followed by a five week month, and ended by a four week month.

A thirteen period calendar may be used as an alternative. The retailer must determine the structure of the calendar and implement the same consistently. For example, a thirteen period calendar may begin on the Sunday after the last Saturday in February. The calendar year may end on a Saturday 52 or 53 weeks after it begins. Every five or six years there are 53 weeks in the year.

**Note:** The business calendar is configurable using calendar scripts.

The year is divided into four quarters. In the 4-4-5 quarter the first quarter contains two periods of four weeks and one period of five weeks. The following figure represents the Time entity relationship.

Figure 2-9 represents Time entity relationships.

**Figure 2-9 Time Entity Relationships**

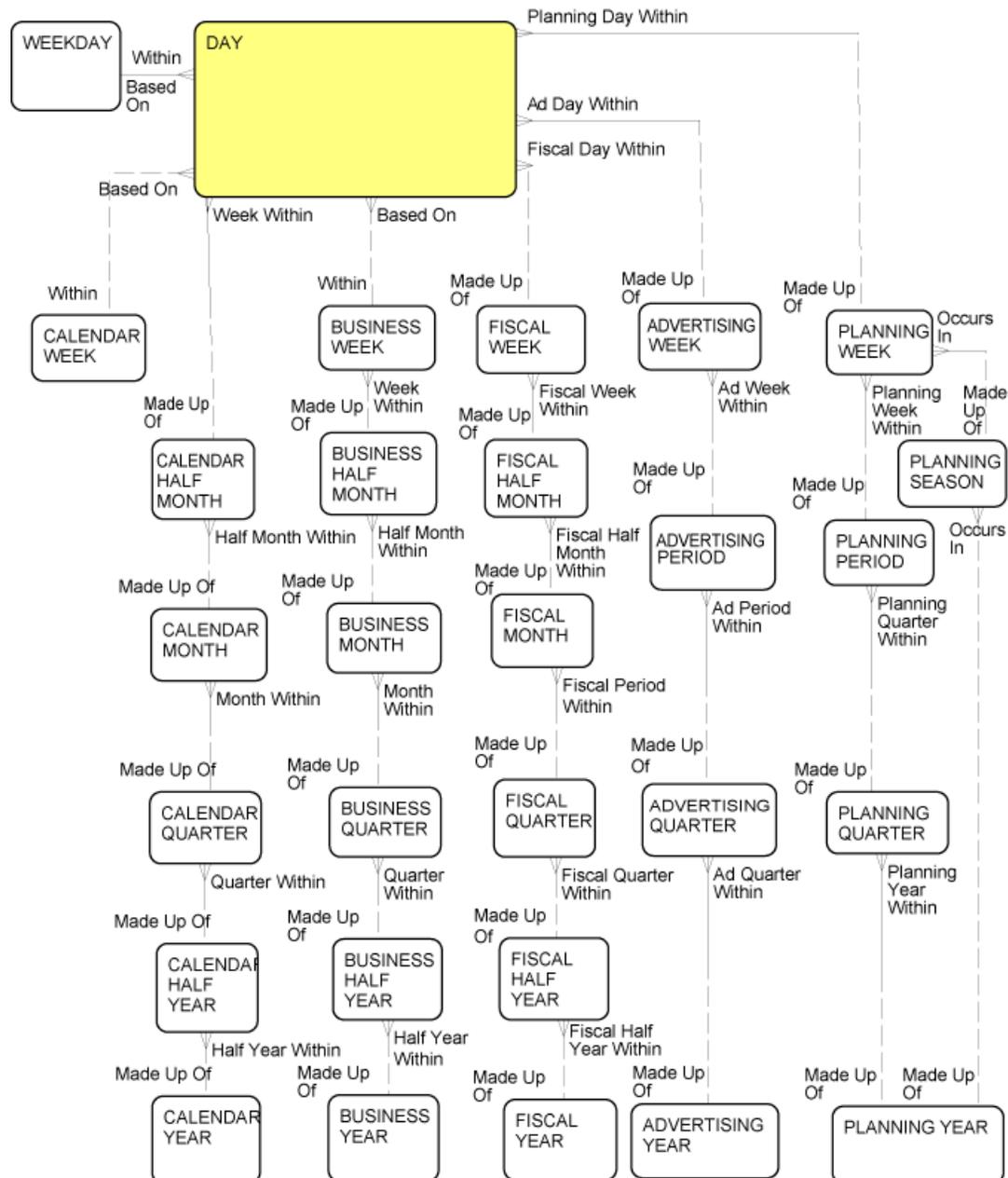


Table 2-15 describes the Time Entities.

**Table 2–15 Time Entity Description**

| <b>Entity</b>                   | <b>Descriptions</b>  |
|---------------------------------|--|
| ADVERTISING PERIOD              | Period level in the advertising calendar.                              |
| ADVERTISING QUARTER             | Quarter level in the advertising calendar.                             |
| ADVERTISING WEEK                | Week level in the advertising calendar.                                |
| ADVERTISING YEAR                | Year level in the advertising calendar.                                |
| BUSINESS HALF MONTH             | Half-month level in the Business calendar.                             |
| BUSINESS HALF YEAR              | Half-year level in the Business calendar.                              |
| BUSINESS MONTH                  | One month in the Business calendar.                                    |
| BUSINESS QUARTER                | Quarter level in Business calendar.                                    |
| BUSINESS WEEK                   | One week in the Business calendar.                                     |
| BUSINESS YEAR                   | One year in the Business calendar.                                     |
| CALENDAR HALF MONTH             | Half-month level in the normal calendar.                               |
| CALENDAR HALF YEAR              | Half-year level in the normal calendar.                                |
| CALENDAR MONTH                  | Month level in the normal calendar.                                    |
| CALENDAR QUARTER                | Quarter level in the normal calendar.                                  |
| CALENDAR WEEK                   | Week level in the normal calendar.                                     |
| CALENDAR YEAR                   | Year level in the normal Calendar.                                     |
| DAY                             | Day level in the normal calendar. This day is common to all calendars. |
| FISCAL HALF MONTH               | Half-month level in the fiscal calendar.                               |
| FISCAL HALF YEAR                | Half-year level in the fiscal calendar.                                |
| FISCAL MONTH                    | Month level in the fiscal calendar.                                    |
| FISCAL QUARTER                  | Quarter level in the fiscal calendar.                                  |
| FISCAL WEEK                     | Week level in the fiscal calendar.                                     |
| FISCAL YEAR                     | Year level in the fiscal calendar.                                     |
| PLANNING PERIOD                 | Period level in the planning calendar.                                 |
| PLANNING QUARTER                | Quarter level in the planning calendar.                                |
| PLANNING SEASON                 | Plan season information.   |
| PLANNING SEASON WEEK ASSIGNMENT | Plan season and respective week relationships.                         |
| PLANNING WEEK                   | Week level in the planning calendar.                                   |
| PLANNING YEAR                   | Year level in the planning calendar.                                   |
| WEEK                            | Week level in normal calendar.   |
| WEEK DAY                        | Calendar weekdays.   |

## Time of Day Entities

The Time of Day hierarchy permits analysis of traffic flows and employee productivity, as well as for analysis of loss prevention where identifying problems and trends

requires the use of hourly or smaller time increments. In addition, the time of day hierarchy allows analysis of sales and return transactions on a quarter-hourly basis.

The Time of Day hierarchy is not related or linked to the time calendar hierarchy. It captures time of day at hour, half hour and quarter hour level.

Figure 2–10 represents the Time of Day Entity Relationships.

**Figure 2–10 Time of Day Entity Relationships**

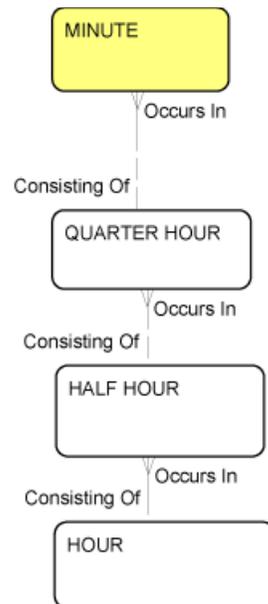


Table 2–16 describes the Time of Day Entities.

**Table 2–16 Time of Day Entity Descriptions**

| Entity       | Description                  |
|--------------|------------------------------|
| HALF HOUR    | Identifies the half hour.    |
| HOUR         | Identifies the hour.         |
| MINUTE       | Identifies the minute.       |
| QUARTER HOUR | Identifies the quarter hour. |

## Time Transformation Entities

Time-based comparisons are an essential part of analysis at almost every level in a retail environment. Time transformations are used to compare values from different time periods. The current year versus last year and month-to-date comparisons are examples of common time transformations. Typical examples are the comparison of sales value for the current season-to-date to the same period last year, or the retail value of inventory compared to the previous week.

Time Transformation entities enable following types of analysis:

- Store sales by day, week (calendar, fiscal, business, Ad), and month
- Comparable store sales using figures such as:
  - this-year-this week (TY-TW) versus last-year-this week (LY-TW)



Figure 2–17 describes the Time Transformation Entities.

**Table 2–17 Time Transformation Entity Description**

| <b>Entity</b>                     | <b>Description</b>  |
|-----------------------------------|---|
| ADVERTISING PERIOD                | Information relating to a Period in Advertising Calendar.                                       |
| ADVERTISING QUARTER               | Quarter level in the advertising calendar.  |
| ADVERTISING WEEK                  | Week level in the advertising calendar.   |
| ADVERTISING YEAR                  | Year level in the advertising calendar.   |
| CALENDAR HALF MONTH               | Half-month level in the normal calendar.  |
| CALENDAR HALF YEAR                | Half-year level in the normal calendar.   |
| CALENDAR MONTH                    | Month level in the normal calendar.   |
| CALENDAR QUARTER                  | Quarter level in the normal calendar.   |
| CALENDAR WEEK                     | Week level in the normal calendar.  |
| CALENDAR YEAR                     | Year level in the normal calendar.  |
| DAY                               | Day level in the normal calendar.   |
| DAY TO DATE TRANSFORMATION        | Cumulative time transformations at the day level.   |
| DAY TRANSFORMATION                | Transformation for a day, for example: this day last year, this day last month.                 |
| FISCAL HALF MONTH                 | Half-month level in the fiscal calendar.  |
| FISCAL HALF YEAR                  | Half-year level in the fiscal calendar.   |
| FISCAL MONTH                      | Month level in the fiscal calendar.   |
| FISCAL QUARTER                    | Quarter level in the fiscal calendar.   |
| FISCAL WEEK                       | Week level in the fiscal calendar.  |
| FISCAL YEAR                       | Year level in the fiscal calendar.  |
| HALF MONTH TO DATE TRANSFORMATION | Cumulative time transformations at the half-month level.  |
| HALF MONTH TRANSFORMATION         | Transformation for a half month such as this half month last year or this year last half month. |
| HALF YEAR TO DATE TRANSFORMATION  | Cumulative time transformations at the half-year level.   |
| HALF YEAR TRANSFORMATION          | Time transformations at the half-year level.  |
| MONTH TO DATE TRANSFORMATION      | Cumulative time transformations at the month level.   |
| MONTH TRANSFORMATION              | Time transformations at the month level.  |
| PERIOD TO DATE TRANSFORMATION     | Cumulative time transformations at the period level.  |
| PERIOD TRANSFORMATION             | Time transformations at the period level.   |
| PLANNING PERIOD                   | Period level in the planning calendar.  |
| PLANNING QUARTER                  | Quarter level in the planning calendar.   |

**Table 2–17 (Cont.) Time Transformation Entity Description**

| <b>Entity</b>                  | <b>Description</b>   |
|--------------------------------|--|
| PLANNING WEEK                  | Week level in the planning calendar.   |
| PLANNING YEAR                  | Year level in the planning calendar.   |
| QUARTER TO DATE TRANSFORMATION | Cumulative time transformations at the quarter level.  |
| QUARTER TRANSFORMATION         | Time transformations at the quarter level.   |
| SEASON                         | Seasons and their attributes. Seasons are arbitrary periods of time around which the retailer may organize their buying and selling patterns. Each day should fall within no more than one season. |
| TIME STANDARD BY DAY           | Information relating to a day.   |
| TIME STANDARD BY WEEK          | Information relating to a week.  |
| WEEK TO DATE TRANSFORMATION    | Cumulative time transformations at the week level.   |
| WEEK TRANSFORMATION            | Time transformations at the week level.  |
| YEAR TRANSFORMATION            | Transformations at the year level.   |

## Touchpoint Entities

Touchpoint is the interface for interaction between the retail business unit and customer. Touchpoint has two sub-entities: store workstation and call center. Each touchpoint is associated with an organization business unit and each call center touchpoint is associated with an employee. The following table describes the Touchpoint entities.

Table 2–18 describes the Touchpoint Entities.

**Table 2–18 Touchpoint Entity Descriptions**

| <b>Entity</b>     | <b>Description</b>  |
|-------------------|---|
| CALL CENTER       | A unit within an organization or a third-party organization that handles telephone sales, services, or both.  |
| STORE WORKSTATION | Device used as an Interface to any retail business function, for example, the capture and storage of transactions and operational performance reporting. Usually a cash register.   |
| TOUCHPOINT        | Place from where transactions take place. Meeting point for customer and retail organization. Touchpoint can be both logical and physical. <ul style="list-style-type: none"> <li>■ Call Center: A department within a retail organization or a third-party organization that handles telephone sales, service, or both.</li> <li>■ Store Workstation: A device used as an as interface to any retail business function, for example, the capture and storage of transactions and operational performance reporting.</li> </ul> |

**Table 2–18 (Cont.) Touchpoint Entity Descriptions**

| Entity                    | Description   |
|---------------------------|---|
| USER                      | Associative entity for Employee, Job associates a unique ID for each job role that an employee performs at a particular store. An employee appears only once in the Employee table, but in a user table, the employee appears once for each job role at each store. |
| WORKSTATION DISPLAY       | Display unit for items placed for sale at the workstation   |
| WORKSTATION LOCATION TYPE | Lookup for Workstation Location types.  |

## Vendor Entities

A party from whom the retail enterprise may purchase goods or services.

Table 2–19 describes the Vendor Entities.

**Table 2–19 Vendor Entity Descriptions**

| Entity                      | Description   |
|-----------------------------|---|
| ADDRESS LOCATION            | Address for a physical; location.   |
| APPOINTMENT CALENDAR        | Appointment calendar for a vendor with the retail business unit.  |
| APPOINTMENT TYPE            | Lookup for Appointments types such as recurring, urgent, or planned.  |
| CARRIER                     | An external party that transports merchandise or supply items from their source to the retail store and from the retail store back to their source.   |
| DAY                         | Day Level in time entity, lowest level of each type of calendar.  |
| DEAL                        | Special offer from a vendor to the retail organization. The deal generally provides allowances, discounts, special favorable terms of payment or other incentives to motivate the retail organization to purchase more products or services from a supplier.  |
| DEAL VENDOR ITEM ASSIGNMENT | Identifies a specific Vendor Item offered as part of a deal to the retail organization and defines how the deal cost is to be handled.  |
| DISCREPANCY TOLERANCE RULE  | Defines permissible variance between the total inventory control document cost (based on the suppliers cost) and the stores receiving total (based on the stores record of supplier item cost). Any variance that exceeds the discrepancy threshold triggers an invoice or item-level reconciliation. |
| FACTOR COMPANY              | Information about the factor company.   |
| ORGANIZATION BUSINESS UNIT  | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse.   |
| ORGANIZATION MARKET DATA    | Publicly available and statistical information regarding the customer organizations, such as DUNS number and number of employees.   |
| STATUS                      | Lookup for status, such as Buy, Not Buy, Suspended, or Active.  |
| STATUS REASON               | Reason for the vendor status. For example, if the status is "Not Buy", a reason could be government restrictions, vendor quality issues, and others.  |

**Table 2–19 (Cont.) Vendor Entity Descriptions**

| <b>Entity</b>                        | <b>Description</b>  |
|--------------------------------------|---|
| STATUS TYPE                          | Lookup for status.  |
| TERM MASTER                          | Master data of terms of business with the vendor.   |
| VENDOR                               | External source for merchandise and goods that the retail store offers or for supplies and goods that the retail organization uses. <ul style="list-style-type: none"> <li>▪ Vendor site: Vendor location.</li> </ul> |
| VENDOR ADDRESS                       | Associative entity between Vendor and Address Location; maps vendors to their addresses.  |
| VENDOR APPOINTMENT                   | Details of vendor appointments. Vendor appointments are regular visits by the vendor's representative to the retail store.  |
| VENDOR CARRIER ASSIGNMENT            | Associative entity for Vendor and Carrier; maps vendors and their carriers.   |
| VENDOR CLASS                         | Classification of Vendors such as Primary, Associate, or Direct Supply.   |
| VENDOR CONTRACT                      | Details of contract with Vendor.  |
| VENDOR FACTOR COMPANY ASSIGNMENT     | Associative entity linking the factor company with the vendor.  |
| VENDOR ITEM                          | Items supplied by the vendor, along with vendor-specific item and provides the vendor-specific attributes of the item. Provides the vendor's view of the item and uses the vendor's descriptions of item attributes.  |
| VENDOR ITEM BUSINESS UNIT ASSIGNMENT | Defines the Vendor Items supplied to a Business Unit.   |
| VENDOR QUICK FACTS                   | Collection of vendor related measures.  |
| VENDOR RATING                        | Rating for a vendor   |
| VENDOR RATING TYPE                   | Lookup for vendor rating type such as timeliness or quality of goods.   |
| VENDOR SITE                          | Subentity of Vendor indicating the vendor location which supplies the item.   |
| VENDOR SITE ADDRESS                  | Association entity between the Vendor Site or Vendor and the address location.  |
| VENDOR SITE CARRIER ASSIGNMENT       | Relationship between VENDOR SITE and CARRIER.   |
| VENDOR STATUS                        | Status of Vendor. Indicates is the vendor is presently used, on suspension, or another status.  |

## Vendor SKU Business Unit Assignment

Vendor SKU Business Unit Assignment shows the relationship between SKU Item, Item, Vendor and Organization Business Unit.

[Table 2–20](#) describes the Vendor SKU Business Unit Assignment.

**Table 2–20 Vendor SKU Business Unit Assignment Entity Description**

| Entity                                | Description   |
|---------------------------------------|---|
| ORGANIZATION BUSINESS UNIT            | A business unit of the organization that sells, stores, or distributes merchandises and services through either a physical location (store), catalog, web page or other channel, distribution center, or warehouse. |
| ORGANIZATION BUSINESS UNIT ASSIGNMENT | Place from where an organization conducts its business, for example, store, distribution center, warehouse, web-store or catalogue.   |
| SKU ITEM                              | Stock Keeping Unit or unit identification (typically the UPC) used to track store inventory and sales. Each SKU is associated with an item, variant, product line, bundle, service, fee or attachment.              |
| VENDOR                                | External source for merchandise and goods that the retail store offers or for supplies and goods that the retail organization uses.   |
| VENDOR ITEM BUSINESS UNIT ASSIGNMENT  | Defines the Vendor Items supplied to a Business Unit.   |
| VENDOR ITEM SKU ASSIGNMENT            | Associates vendor with Item SKU   |
| VENDOR SKU BUSINESS UNIT ASSIGNMENT   | Relationship between SKU Item vendor and organization business unit.  |

## Lookup Entities

Lookup entities hold the descriptions for frequently used attributes which saves space, as the referring fact table holds only a small key or code and foreign key, and Oracle Retail Data Model stores the space consuming description in a lookup entity table and does not repeat it in each transaction row in which it is referenced.

[Table 2–21, "Lookup Entity Descriptions"](#) lists and briefly describes the lookup entities and links to individual topics for each entity. These individual topics provide a more complete description, list possible values, and list entities that use the lookup.

**Table 2–21 Lookup Entity Descriptions**

| Entity Name                              | Brief Description  |
|--|--|
| <a href="#">Account Type</a>             | Types of accounts.   |
| <a href="#">Activity Request Type</a>    | Distinct occurrences of activity request types.  |
| <a href="#">Address Type</a>             | Address types; for example, Home, office, or warehouse.  |
| <a href="#">Analysis Duration</a>        | A period of time that can extend over 2 or more days.  |
| <a href="#">Appointment Type</a>         | Appointment types; for example, recurring, urgent, or planned.   |
| <a href="#">Authorization Method</a>     | Identifies the method used to authorize tender.  |
| <a href="#">Business Unit Types</a>      | Unique retailer assigned identifier for a Retail Store, Distribution Center or Administration Center that performed the transaction. |
| <a href="#">Business Unit Usage Type</a> | The type of business unit (for example, store, kiosk, or call center)  |
| <a href="#">Card Type</a>                | A code denoting which kind of card was accepted.   |
| <a href="#">Certificate Age Band</a>     | Static Certificate age bands used to categorize based on age.  |
| <a href="#">Certificate Type</a>         | Contains information on certificate types like Gift Certificate or Work Certificate.   |
| <a href="#">Channel Type</a>             | Types of channel (for example, selling or distribution).   |
| <a href="#">Check In Type</a>            | Lookup for different types of check in.  |
| <a href="#">Coating</a>                  | The Coating attribute of SKU Item.   |

**Table 2–21 (Cont.) Lookup Entity Descriptions**

| <b>Entity Name</b>            | <b>Brief Description</b>  |
|-------------------------------|---|
| Color                         | The Color attribute of SKU Item.  |
| Cost Per Unit Type            | Defines the unit type the owned attribute costs are assigned to for an item such as sale, pack, or ship unit.                                       |
| Coupon Scan                   | The barcode on a store or manufacturer coupon.  |
| Currency                      | National designation and quantitative value of monetary media used as tender in the processing of the Tender Line Item.                             |
| Customer Occasion Type        | Categorizations of Customer Occasion.   |
| Customer Order And Hold Event | Distinct values of customer order hold events.  |
| Customer Pickup Type          | Defines where and how a customer may pickup an item.  |
| Denomination                  | Specifies the quantitative value of the referenced Currency media.  |
| Discount Type                 | Captures the various types of discount.   |
| Disposition Type              | Denotes what disposition a returned item was in (for example, return to vendor).  |
| Dye                           | The Dye attribute of SKU Item.  |
| Employee Type                 | Describes types of Employee (for example, Part Time).   |
| Entry Method                  | Method used of entering transaction data  |
| Entry Source                  | Credit card or member card information  |
| Environment Type              | Defines the temperature, relative humidity, lighting and other physical or climatic environmental requirements for storing and displaying the item. |
| Fabric                        | The Fabric attribute of SKU Item.   |
| Fiber                         | The Fiber attribute of SKU Item.  |
| Hazardous Material Type       | Defines the relevant hazardous material handling properties of the item.  |
| Inventory Accounting Method   | Defines the inventory accounting method to be used for the item.  |
| Inventory Document Type       | Type of inventory document  |
| Inventory Location Type       | Type of inventory location.   |
| Inventory Type                | Type of Inventory (for example, Damaged or Customer Order).   |
| Inventory State               | Defines a state that Stock Items are kept in the retail enterprise item inventory records.  |
| Inventory Status              | Status of the inventory.  |
| Item State                    | Lookup for the state of the item (for example, Damaged Item).   |
| Issue Type                    | How the certificate or voucher was issued by the organization business unit.  |
| Language Type                 | Language for which the system keeps some string translations.   |
| Local Authority Type          | The Local Authority Type is for types of Local Authority  |
| Location Type                 | A code that describes what business activities and functions are performed in a specific location.  |
| Manufacturer Coupon Family    | Code assigned by the manufacturer to classify product for promotion purposes.   |
| Media Type                    | A description of Media Type (for example, TV, radio, newspaper, or list)..  |
| Membership Type               | Types of frequent shopper programs (for example, miles or money).   |
| Miscellaneous Line Item Type  | Type of miscellaneous line item   |
| Multiple Tender Class         | Multiple tender combinations.   |
| Order Category Type           | Lookup for types of Order Category (for example, backorder).  |
| Order Line Item State         | A unique retailer assigned code denoting a potential state for a Customer Order Line Item (for example, Partial Delivery).                          |
| Order Type                    | A unique retailer assigned code denoting a type of Customer Order (for example, Layaway).   |
| Order Source Type             | Description of an order's source (for example, store or call center).   |
| Order State                   | A unique retailer assigned code denoting a potential state for a Customer Order.  |

**Table 2–21 (Cont.) Lookup Entity Descriptions**

| <b>Entity Name</b>             | <b>Brief Description</b>   |
|--------------------------------|--|
| Order Status Type              | Lookup for the different types of order status type.   |
| Pay Category                   | Various pay categories present in an organization.   |
| Pay Type                       | Various pay types under the different categories.  |
| Personal Id Required Type      | Type of personal identification required to authorize a tender.  |
| Preference Type                | The type of preference relevant to consumers or customers (for example, color preference).   |
| Price List Lookup              | Basic published or advertised price, often subject to discount.  |
| Profile Source                 | The source from which a Profile is acquired or populated (for example, a mailing list provider).   |
| Reason                         | Reason codes and descriptions (for example, Cancel For Late Shipment or Return Due to Cancellation of Order).  |
| Reason Category                | Reason type codes and their descriptions (for example, Urgent).  |
| Retail Transaction Type Lookup | A kind of Retail Transaction lookup that is mapped to a Resource to control access to that kind of Retail Transaction.   |
| Retail Type                    | The retail types (for example, Regular or Promotion).  |
| Return Status                  | The present Status of Return Activity (for example, Delivered or Pending).   |
| RFMP Method                    | Different methods of calculating the Recency, Frequency, Monetary, and Profitability (RFMP) scores.  |
| Request Origin Type Lookup     | Distinct occurrences of request origins.   |
| Sale Or Return Action Lookup   | A code denoting how the item is being treated in the line item.  |
| Sale Weight Or Unit Count      | Indicates whether the Item is sold by weight or as a unit.   |
| Security Required Type         | Defines the security environment and procedures required for receiving, displaying and selling high priced merchandise like jewelry, certain prescription drugs, ordinance, fireworks. |
| Selling Location Type          | The different types of selling location.   |
| Selling Status                 | Selling status of the item.  |
| Shipment Method                | Different types of shipment methods.   |
| Shipment Priority              | Different types of shipment priority.  |
| Size                           | The Size attribute of SKU Item.  |
| Size Type                      | The size details of the SKU.   |
| SKU Item Style                 | Identifies and describes the general appearance of retail items.   |
| SKU Item Type                  | Metadata denoting the kind of SKU item being sold (or returned) in the line item.  |
| Status Reason                  | The reason why a particular Party Status Type may be assigned to a customer  |
| Status Type                    | The domain of classifications tracked to the roles that a Customer is fulfilling.  |
| Stock Item Type                | Types of Stock Item.   |
| Store Financial Ledger Account | Journal Accounts for the accumulation of certain transactions and charges  |
| Tax Authority                  | A government authority that levies sales taxes and on whose behalf the store collects these sales taxes.   |
| Tax Exemptions                 | Different types of tax exemptions.   |
| Taxable Group                  | A group of Items for which a TaxAuthority defines TaxGroupRules.   |
| Tender Class                   | Type of tenders with common characteristics (for example, check or coupon).  |
| Tender Type                    | All the tender type IDs and their parent tender type groups.   |
| Tender Repository Class        | Type of Tender Repository.   |
| Term Code                      | Information about different terms like sales.  |
| Theft Type                     | Different types of theft; for example, Bank Fraud, Credit Card Fraud, Government Documents or Benefit Fraud, Employment-Related Fraud, Load Fraud, Other, Phone or Utilities Fraud.    |

**Table 2–21 (Cont.) Lookup Entity Descriptions**

| Entity Name        | Brief Description   |
|--------------------|---|
| Transaction Type   | Specific designator that indicates what type of transaction that has been captured through a workstation. |
| Transfer Type      | Inventory transfer type.  |
| Unit Of Measure    | Identifies and describes valid units of measure that are used throughout the model.                       |
| UOM Conversion     | Formulas for converting from one Unit of Measure to another.  |
| Value Type         | The type of value (such as time or money).  |
| Variety Type       | Captures all the variety type (for example, Color).   |
| Vendor Class       | Classification of Vendors.  |
| Vendor Rating Type | Vendor rating type values.  |
| Work Hour Type     | Different types of work hour.   |

## Account Type

The Account Type entity captures types of account. The account type could be Installment Payment Account, Charge Account, Trade Account, Layaway Account, and Rental Account.

## Activity Request Type

The Activity Request Type entity is distinct occurrences of activity request types (for example, Where Is My Order, general, and gift certificate lookup).

This lookup entity is used for the following entities:

- Catalog Request Type Day Derived
- Customer Service Request

## Address Type

The Address Type entity is types of addresses (or example, home, office, or warehouse).

This lookup entity is used for the following entities:

- Organization Business Unit
- Address Location
- Customer Address
- Customer Account Tender

## Analysis Duration

The Analysis Duration entity is a period of time that can extend over two or more days. Valid values are: Analysis On Week Basis, Analysis On Month Basis, and Analysis On Year Basis.

## Appointment Type

The Appointment Type entity is for types of appointment (for example, recurring, urgent, or planned).

This lookup entity is used for Vendor Appointment entity.

## Authorization Method

The Authorization Method entity identifies the method used to authorize tender. Examples include: by electronic query, by sales employee visual inspection of customer card and id.

This lookup entity is used for the following entities:

- Tender
- Credit-Debit Card Tender

## Business Unit Types

The Business Unit Types are unique retailer assigned identifier for a Retail Store, Distribution Center or Administration Center that performed the transaction.

This lookup entity is used for the following entities:

- Organization Business Unit
- Touchpoint
- Organization Demography Value
- Customer Order
- Customer Order Department Day Aggr
- Customer Order Item Day Derived
- Customer Order Item Month Aggr
- Organization Business Unit
- Customer Order Item Week Aggr
- Customer Order Line Item
- Retail Transaction
- Customer Order Subclass Day Aggr
- Customer Order Subclass Month Aggr
- Customer Order Subclass Week Aggr
- Purchase Order Line Item
- Inventory Location
- Selling Location
- Organization Department
- Retail Markdown Department Day Aggr
- Retail Markdown Department Week Aggr
- Retail Markdown Item Day Aggr
- Retail Markdown Item Week Aggr
- Retail Sale Return BU Day Aggr
- Retail Sale Return Item Month Aggr
- Retail Sale Return Department Day Aggr
- Retail Sale Return Department Week Aggr
- Retail Sale Return Item Day Derived
- Retail Sale Return Line Item
- Retail Sale Return Promotion Line Item
- Retail Sale Return Subclass Month Aggr
- Retail Sale Return Subclass Week Aggr
- Retail Tender Line Item
- Retail Transaction Line Items
- Sales Forecast Item Organization Hierarchy Week
- Sales Plan Item Organization Hierarchy Week

## Business Unit Usage Type

The Business Unit Usage Type entity is the site usage. Possible values for the site usage are:

- Store
- Store within a Store (Quick Serve, Dry Cleaning, Bank, ATM, Hair Salon, Parcel Service, Wireless Provider)
- Department (Pharmacy, Film, Optician, Nursery, Cosmetics, Gift Registry, Customer Service, Returns counter, Pickup Counter, Drive-through)
- Kiosk (Cart, Video, Stationary)
- Vending machine Warehouse
- Distribution Center
- Call Center
- Administrative

## Card Type

The Card Type entity is a code denoting which kind of card was accepted. Examples include: Amex, Diners, Disc, JCB, MC, or Visa.

This lookup entity is used for Credit Debit Card Tender.

## Certificate Age Band

The Certificate Age Band entity is for Static Certificate age bands which are used to categorize based on age. Each age band is a client-defined range of age in days. The age of a certificate is used to determine the age band into which it falls.

This lookup entity is used for the following entities:

- Certificate Activity Day Aggr
- Certificate Activity Transaction Derived
- Certificate Activity Week Aggr

## Certificate Type

The Certificate Type entity contains information on certificate types like Gift Certificate or Work Certificate.

This lookup entity is used for the following entities:

- Certificate
- Certificate Activity Day Aggr
- Certificate Activity Transaction Derived
- Certificate Activity Week Aggr
- Certificate Tender
- Certificate Line Item

## Channel Type

The Channel Type entity is types of channel. Examples include: selling, distribution, selling and distributing.

This lookup entity is used for the following entities:

- Organization Business Unit
- Customer Employee Sale Return Month Aggr
- Customer Employee Sale Return Week Aggr
- Customer Order

Customer Order Department Day Aggr  
 Customer Order Department Month Aggr  
 Customer Order Item Day Derived  
 Customer Order Item Month Aggr  
 Customer Order Item Week Aggr  
 Customer Order Line Item  
 Retail Transaction  
 Customer Order Subclass Day Aggr  
 Customer Order Subclass Month Aggr  
 Customer Order Subclass Week Aggr  
 Customer SKU Sale Return Day Derived  
 Retail Markdown Department Day Aggr  
 Retail Markdown Department Week Aggr  
 Retail Markdown Item Day Aggr  
 Retail Markdown Item Week Aggr  
 Retail Sale Return BU Day Aggr  
 Retail Sale Return Department Day Aggr  
 Retail Sale Return Department Week Aggr  
 Retail Sale Return Item Day Derived  
 Retail Sale Return Item Month Aggr  
 Retail Sale Return Item Week Aggr  
 Retail Sale Return Line Item  
 Retail Sale Return Promotion Line Item  
 Retail Sale Return Subclass Day Aggr  
 Retail Sale Return Subclass Month Aggr  
 Retail Sale Return Subclass Week Aggr  
 Retail Tender Line Item  
 Retail Transaction Line Item  
 Sales Forecast Item Organization Hierarchy Week  
 Sales Plan Item Organization Hierarchy Week

### Check In Type

The Check In Type entity is used to lookup for different types of check in.

### Coating

The Coating entity is for values of the Coating attribute of SKU Item.

### Color

The Color entity is for the Color attribute of SKU Item.

### Cost Per Unit Type

The Cost Per Unit Type entity is the unit type the owned attribute costs are assigned to for an item. Valid unit types include:

- Sale unit
- Pack unit
- Ship unit

This lookup entity is used for Inventory Control Document Line Item entity.

## Coupon Scan

The Coupon Scan entity is the barcode on a store or manufacturer coupon. The coupon scan code comprises two parts: the first is a fixed 12 character code that contains the manufacturer identification, family code, and coupon value, the second is based on Code 128 and comprises up to 20 characters which specify the manufacturers number system character, the offer code, and end of offer code. The supplementary Code 128 was introduced as a guideline in 1997.

These codes included are:

- Primary Label
- Secondary Label
- Coupon ID

## Currency

The Currency entity is the national designation and quantitative value of monetary media used as tender in the processing of the Tender Line Item entity. Examples include: US Dollar, Indian Rupee, or Japanese Yen.

This lookup entity is used for the following entities:

- Organization Business Unit
- Competitor Location
- Customer Order
- Retail Transaction
- Exchange Rate Currency Day
- Purchase Order
- Vendor
- Inventory Control Document
- Trade Area Coverage
- Tender
- Retail Tender Line Item
- Vendor Factor Company Assignment

## Customer Occasion Type

The Customer Occasion Type entity is for categorizations of Customer Occasion.

## Customer Order And Hold Event

The Customer Order And Hold Event entity is distinct values of customer order hold events.

## Customer Pickup Type

The Customer Pickup Type entity defines where and how a customer may pickup an item. For example, a refrigerator may have to be picked up at the shipping dock or at the retailer's warehouse.

This lookup entity is used for the following entities:

- Item
- SKU Item

## Denomination

The Determination entity specifies the quantitative value of the referenced Currency media. Examples include: ten dollars (as in 10 dollar bill), fifty pounds (fifty pound note), 25 cents.

## Discount Type

The Discount Type entity captures the various types of discount. Examples include: quantity discount or cash discount.

This lookup entity is used for Discount Line Item.

## Disposition Type

The Disposition Type entity denotes what disposition a returned item was in. Examples include: return to vendor, return to stock, or write off.

This lookup entity is used for the following entities:

- Certificate
- Customer Order Line Item
- Inventory Control Document
- Retail Sale Return Line Item

## Dye

The Dye entity is for values of the Dye attribute of SKU Item.

## Employee Type

The Employee Type entity describes types of Employee. Examples include: Part Time, Contractual, or Full Time.

This lookup entity is used for the following entities:

- Employee
- Employee Labor

## Entry Method

The Entry Method entity is the method used of entering transaction data. Examples include: Entry Through Key, Entry Through Magnetic Ink Character Recognitions, Entry Through MSR, Entry Through Scanning, Entry Through Smart Card

This lookup entity is used for the Retail Transaction Line Item.

## Entry Source

The Entry Source entity is the credit card or member card information.

## Environment Type

The Environment Type entity defines the temperature, relative humidity, lighting and other physical or climatic environmental requirements for storing and displaying the item.

This lookup entity is used for the following entities:

- Item

SKU Item

## **Fabric**

The Fabric entity is for values of the Fabric attribute of SKU Item.

## **Fiber**

The Fiber entity is for values of the Fiber attribute of SKU Item.

## **Hazardous Material Type**

The Hazardous Material Type entity defines the relevant hazardous material handling properties of the item. The code is provided for oil products, pesticides, swimming pool suppliers, or fertilizers (especially bomb grade).

This lookup entity is used for the following entities:

Item  
SKU Item

## **Inventory Accounting Method**

The Inventory Accounting Method defines the inventory accounting method to be used for the item. Examples include: the retail method or cost method.

This lookup entity is used for the following entities:

Item  
SKU Item

## **Inventory Document Type**

The type of inventory document. Examples include: Transfer In, Transfer Out, and Return to Vendor.

## **Inventory Location Type**

The type of inventory location. Examples include: Customer Service, Display, Store, and Shelf.

## **Inventory Type**

The Inventory Type entity is the type of Inventory. Examples include: Damaged or Customer Order.

This lookup entity is used for the following entities:

Inventory Location

## **Inventory State**

The Inventory State entity defines a state that Stock Items are kept in the retail enterprise item inventory records. Values include: On Hand, On Order, On Layaway, Damaged, and To Be Returned.

This lookup entity is used for the following entities:

Inventory Item State  
Inventory Item State History Week

## Inventory Status

The Inventory Status entity is the status of the inventory. Examples include work-in-progress, manufactured, and finished.

## Item State

The Item State entity is the state of the item. Examples include: Damaged Item, Item Passed Quality Checked, Item Return from Quality Checked, or Item is Sent to Quality Checked.

This lookup entity is used for the following entities:

Customer Order Line Item State Assignment  
Purchase Order Line Item State

## Issue Type

The Issue Type entity is how the certificate or voucher was issued by the organization business unit. Examples include: Embossed and Printed.

This lookup entity is used for Certificate entity.

## Language Type

The Language Type entity is the language for which the system keeps some string translations. Examples include: Dutch, English, Francais.

This lookup entity is used for Customer Order entity.

## Local Authority Type

The Local Authority Type is for types of Local Authority

## Location Type

The Location Type entity is a code that describes what business activities and functions are performed in a specific location. For an inventory location it would be:

- DISPLY for display
- CUSTSVC for customer service
- RETADJ for returns and adjustments
- STOCKPT for stock point
- RECV for receiving

This lookup entity is used for the following entities:

Organization business Unit  
Store Workstation  
Inventory Location  
Selling Location  
Selling Location Type  
Workstation Location Type

## Manufacturer Coupon Family

The Manufacture Coupon Family entity is code assigned by the manufacturer to classify product for promotion purposes. Examples include:

- Raincheck Coupon
- Manufacturer Coupon
- Electronic Coupon.

This lookup entity is used for the Coupon Tender Line Item Tender.

## Media Type

The Media Type entity is a description of Media Type (for example, TV, radio, newspaper, or list)..

## Membership Type

The Membership Type entity is for types of frequent shopper programs (for example, miles or money).

## Miscellaneous Line Item Type

The type of miscellaneous line item. Examples include: Customer Line item and Miscellaneous fees.

## Multiple Tender Class

The Multiple Tender Class entity is for multiple tender combinations. Examples include cash and credit card, or cash and coupon.

This lookup entity is used for the Retail Tender History.

## Order Category Type

The Order Category Type is to lookup types of Order Category. Examples include: backorder, seasonal order and Temporary Order.

This lookup entity is used for the following entities:

Customer Order  
Purchase Order

## Order Line Item State

The Order Line Item State entity is a unique retailer assigned code denoting a potential state for a Customer Order Line Item. Examples include:

Allocated  
Pick  
Booked  
Billed  
Back Ordered  
Cancel  
Shipped  
Deleted  
Pending  
Partial Delivery

Delivery Complete  
Return  
Partial Pickup  
Pickup Complete

This lookup entity is used for the following entities:

Address Location  
Promotion  
Customer Order Line Item State Assignment  
Customer Order State  
Order State  
Inventory Item State  
Inventory State  
Inventory Item State History Week  
Campaign  
Event  
Purchase Order Line Item State  
Purchase Order State

## Order Type

The Order Type entity is a unique retailer assigned code denoting a type of Customer Order. Examples include Layaway, Order for Delivery, and Order for Pickup.

This lookup entity is used for the following entities:

Customer Order  
Customer Order Line Item  
Customer Order Line Item State Assignment  
Customer Order Line Item State Derived  
Customer Order State  
Order Document  
Purchase Order  
Receiving Document  
Purchase Order Line Item  
Purchase Order Line Item State  
Purchase Order State

## Order Source Type

The Order Source Type entity is the description of an order's source. Examples include calls center, workstation, or store.

This lookup entity is used for the following entities:

Customer Order  
Purchase Order

## Order State

The Order State entity is a unique retailer assigned code denoting a potential state for a Customer Order. Examples include:

Create  
Delete Item  
Add Item  
Change Item

Partial Delivery  
Delivery Complete  
Partial Pickup  
Pickup Complete  
Allocated  
Billed Complete  
Booked Complete  
Backorder

This lookup entity is used for the following entities:

Customer Order State  
Customer Order Line Item State Assignment  
Customer Order Line Item State Derived  
Purchase Order State

## Order Status Type

The Order Status Type entity is the different types of order status type. Examples include

Already Shipped  
Delivered  
Processing  
Partially Delivered

## Pay Category

The Pay Category entity is for various pay categories present in an organization.

## Pay Type

The Pay Type entity is for various pay types under the different categories.

## Personal Id Required Type

The Personal ID Required Type entity is a type of personal identification required to authorize a tender; for example

- Drivers license
- Second credit card
- Social security card

## Preference Type

The Preference Type entity is the type of preference relevant to consumers or customers (for example, color preference).

## Price List Lookup

The Price List Lookup is the basic published or advertised price, often subject to discount.

This lookup entity is used for the following entities:

Customer Order  
Purchase Order

## Profile Source

The Profile Source entity is the source from which a Profile is acquired or populated (for example, a mailing list provider).

## Reason

The Reason entity is codes and descriptions for explanations. Examples include:

- Cancel For Late Shipment
- Partial Shipment Due to Urgency
- Partial Delivery Due to Urgency
- Return For Bad Quality of Item
- Altered For Bad Quality of Item
- Return Due to Cancellation of Order

This lookup entity is used for the following entities:

- Customer
- Customer Status
- Status Reason
- Customer Order
- Customer Order Line Item
- Customer Order Line Item State Assign
- Customer Order Line Item State Derived
- Inventory Control Document Line Item
- Purchase Order
- Purchase Order Line Item
- Vendor
- Return Authorization Request
- Inventory Unavailable By Item Day
- Retail Sale Return Line Item
- Retail Tender Line Item
- Retail Transaction Associate Assignment
- Return To Vendor Item Day Derived
- Vendor Status

## Reason Category

The Reason Category entity is for reason type codes and their descriptions. Examples include:

- Urgent
- Quality
- Other

This lookup entity is used for the following entities:

- Customer Order
- Reason
- Customer Order Line Item
- Purchase Order
- Purchase Order Line Item
- Retail Sale Return Line Item
- Retail Tender Line Item

## Retail Transaction Type Lookup

The Retail Transaction Type Lookup is a kind of Retail Transaction lookup that is mapped to a Resource to control access to that kind of Retail Transaction. The Sample values include:

- Sale
- Return
- Sale Reversal

This lookup entity is used for the following entities:

Retail Transaction  
Retail Transaction Line Item

## Retail Type

The Retail Type entity is for types of retail processing. Examples include: regular, promotion, clearance.

This lookup entity is used for the following entities:

Competitor Retail Item  
Customer Order Line Item  
Retail Transaction  
Inventory Position By Dept. Day Aggr  
Inventory Position By Dept. Week Aggr  
Inventory Position By Item Day Derived  
Inventory Position By Item Week Aggr  
Inventory Position By Subclass Day Aggr  
Inventory Position By Subclass Week Aggr  
Retail Markdown Department Day Aggr  
Retail Markdown Department Week Aggr  
Retail Markdown Item Day Aggr  
Retail Markdown Item Week Aggr  
Retail Sale Return BU Day Aggr  
Retail Sale Return Department Day Aggr  
Retail Sale Return Department Week Aggr  
Retail Sale Return Item Day Derived  
Retail Sale Return Item Month Aggr  
Retail Sale Return Item Week Aggr  
Retail Sale Return Line Item  
Retail Sale Return Promotion Line Item  
Retail Sale Return Subclass Day Aggr  
Retail Sale Return Subclass Month Aggr  
Retail Sale Return Subclass Week Aggr  
Retail Tender Line Item  
Retail Transaction Type  
Retail Transaction Line Item  
Stock Ledger By Subclass Month Aggr  
Stock Ledger By Subclass Week Aggr

## Return Status

The Return Status entity is the present Status of Return Activity. Examples include: Delivered, Pending, Item Partially.

## RFMP Method

The RFMP Method entity is for different methods of calculating the Recency, Frequency, Monetary, and Profitability (RFMP) scores.

This lookup entity is used for Customer RFMP Score.

## Request Origin Type Lookup

The Request Origin Type Lookup is for distinct occurrences of request origins. Examples include: telephone, fax, and Internet.

This lookup entity is used for the following entities:

- Catalog Request By Day Derived
- Customer Service Request

## Sale Or Return Action Lookup

The Sale or Return Action Lookup entity is a code denoting how the item is being treated in the line item.

Possible values include:

- Layaway
- OrderForDelivery
- PreviousLayaway
- ReturnItem
- SaleItem
- Return
- Sale

## Sale Weight Or Unit Count

The Sale Weight Or Unit Count entity indicates whether the ITEM is sold by weight or as a unit. Examples include Item is sold by Unit and Item is sold by Weight.

This lookup entity is used for the following entities:

- Item
- SKU Item

## Security Required Type

The Security Required Type entity defines the security environment and procedures required for receiving, displaying and selling high priced merchandise like jewelry, certain prescription drugs, ordinance, fireworks.

This lookup entity is used for the following entities:

- Item
- SKU Item

## Selling Location Type

The Selling Location Type entity is the different types of selling locations within a store. Examples include shelf, floor, and rack.

This lookup entity is used for Selling Location entity.

## **Selling Status**

The Selling Status entity is the selling status of the item. Examples include active, discontinued, seasonal, to be discontinued, and held for future release.

## **Shipment Method**

The Shipment Method entity is different types of shipment methods. Examples include: Shipment By Air, Shipment By Sea, and Shipment By Train.

This lookup entity is used for the following entities:

- Customer Order
- Purchase Order

## **Shipment Priority**

The Shipment Priority entity is different types of shipment priority. Examples include: Primary, Secondary, and Tertiary.

This lookup entity is used for the following entities:

- Customer Order
- Purchase Order

## **Size**

The Size entity is for values of the Size attribute of SKU Item.

## **Size Type**

The Size Type entity is the size details of the SKU. Examples include small, medium, or large.

## **SKU Item Style**

The SKU Item Style entity identifies and describes the general appearance of retail items.

## **SKU Item Type**

The SKU Item Type entity is metadata denoting the kind of SKU item being sold (or returned) in the line item. Possible values are: Stock, Service, Fee, Deposit, Deposit Refund, Tare, Swatch, Component, Raw, Prepared, Group Select, and Aggregate.

This lookup entity is used for the following entities:

- SKU Item
- Customer Order Line Item
- Customer Order Line Item State Derived
- Retail Sale Return Line Item
- Retail Sale Return Promotion Line Item

## **Status Reason**

The Status Reason entity is the reason why a particular Party Status Type may be assigned to a customer

## Status Type

The Status Type entity is the domain of classifications tracked to the roles that a Customer is fulfilling. Examples: A - Active, I - Inactive, P - Prospective, U - Unmarketable Customer (such as, a deceased customer).

## Stock Item Type

The Stock Item Type entity is types of Stock Items.

## Store Financial Ledger Account

The Store Financial Ledger Account entity is journal accounts for the accumulation of certain transactions and charges. Examples include Actual Receipts By Stores, Actual Receipts Sorted By Day(History), Actual Receipts Sorted By Received Type.

## Tax Authority

The Tax Authority entity is a government authority that levies sales taxes and on whose behalf the store collects these sales taxes. The tax authorities are:

- National
- State
- Province
- City
- County
- Other

This lookup entity is used for Till Tax History.

## Tax Exemptions

The Tax Exemptions entity is different types of tax exemptions.

This lookup entity is used for the following entities:

Item  
SKU Item

## Taxable Group

The Taxable Group entity is a group of Items for which a TaxAuthority defines TaxGroupRules. Examples include food items and hard goods.

This lookup entity is used for the following entities:

Customer Order  
Customer Order Line Item  
Purchase Order Line Item  
Retail Sale Return Line Item  
Retail Sale Return Promotion Line Item  
Till Tax History

## Tender Class

The Tender Class entity is types of tenders with common characteristics. Examples include Check, Coupon, Credit Card, Cash, Debit Card, or Food Stamp.

This lookup entity is used for the following entities:

- Tender Type
- POS Tender Flow
- Tender
- Multiple Tender Class
- Retail Tender History
- Retail Tender Line Item
- Till Derived
- Tender Repository Class

## Tender Type

The Tender Type entity is all of the tender type IDs and their parent tender type groups. The tender type dimension is composed of one table (TNDR\_TYPE\_DM) and one view (TNDR\_TYPE\_GRP\_DM).

An example of a tender type group is credit card. Examples of tender type IDs that belong to the group are American Express, Master Card or Discover Card.

This lookup entity is used for the following entities:

- Customer Order
- POS Tender Flow
- Tender
- Retail Tender History
- Retail Tender Line Item
- Tender Change Line Item
- Till Tender History
- Till Tender History Employee Aggr

## Tender Repository Class

The Tender Repository Class is the types of Tender Repository entities. Examples include: Safes or Tills.

This lookup entity is used for Tender Repository.

## Term Code

The Term Code entity is information about different terms like sales. Examples include: Supplier must be notified of any shortages within three days or Product must be Properly Checked.

This lookup entity is used for the following entities:

- Touchpoint
- Customer Order
- Purchase Order
- Inventory Control Document
- Terms Master

## Theft Type

The Theft Type entity is different types of theft. Examples include: Bank Fraud, Credit Card Fraud, Government Documents or Benefit Fraud, Employment-Related Fraud, Load Fraud, Other, Phone or Utilities Fraud.

## Transaction Type

The Transaction Type entity is a specific designator that indicates what type of transaction that has been captured through a workstation. Sample Values are: Sale, Return, Sale Reversal, or Return Reversal.

This lookup entity is used for the following entities:

- Retail Transaction
- POS Transaction Flow
- Retail Transaction Type
- Retail Transaction Line Item

## Transfer Type

The Transfer Type entity is for the inventory transfer types. Examples include: normal, book, and inter-company.

This lookup entity is used for the following entities:

- Inventory Transfer By Item Day Aggr
- Inventory Transaction Item Week Aggr
- Inventory Transfer By Subclass Day Aggr
- Inventory Transfer By Subclass Week Aggr

## Unit Of Measure

The Unit Of Measure entity identifies and describes valid units of measure that are used throughout the model. Examples include: Pound, Ounce, Gallon, Gram, Kilogram, or Liter.

This lookup entity is used for the following entities:

- Address Location
- Individual Demography Value
- Organization Demography Value
- Item
- SKU Item
- Customer Order Line Item
- Customer Order Line Item State Derived
- Inventory Control Document Line Item
- Purchase Order Line Item
- Vendor Item
- Inventory Item State
- Inventory Location
- Selling Location
- Inventory Item State History Week
- POS Identity
- Post Code
- Market Area
- Media
- Campaign Cost
- Campaign Message Depiction

Cost  
 Creatives  
 Promotion Item  
 Promotion Media Cost  
 Promotion Selling Item  
 Vendor Item Business Unit Assignment  
 Retail Sale Return Promotion Line Item  
 Vendor Item Business Unit Assignment

## UOM Conversion

Formulas for converting from one Unit of Measure to another.

## Value Type

The Value Type entity describes the type of value. Value type could be time or money.

## Variety Type

The Variety Type entity captures all the variety type (for example, Color).

## Vendor Class

The Vendor Class entity is for classification of Vendors. Examples include: Primary, Associate, or Direct Supply.

This lookup entity is used for Vendor entity.

## Vendor Rating Type

The Vendor Rating Type entity is for Vendor rating type values. Examples include: timeliness or based on quality.

This lookup entity is used for Rating entity.

## Work Hour Type

The Work Hour Type entity is for different types of work hour. Examples include standard or overtime.

## Base Entities

Base entities contain atomic level transaction data. Base entities could be leveraged as an Operational Data Store (ODS) and as a system of record. Data in the base entities support the derived and aggregate layers to facilitate Star and population, and act as a source for Data Mining for advanced analysis.

[Table 2–22, "Base Entity Descriptions"](#) lists and briefly describes the base entities and links to individual topics for each entity that provides information about how each entity relates to other entities.

**Table 2–22 Base Entity Descriptions**

| Entity                                    | Description                               |
|---|---|
| <a href="#">Certificate Escheated Day</a> | The date and count of escheated vouchers. |

**Table 2–22 (Cont.) Base Entity Descriptions**

| <b>Entity</b>                             | <b>Description</b>  |
|---|---|
| Customer Order                            | Order placed by a Customer for merchandise or services to be provided at some future date and time.   |
| Customer Order Line Item                  | Line item component of a Customer placed order.   |
| Customer Order Line Item State Assignment | State of a Customer Order line item being for a given period. Examples of states include pending, back order, billed, and booked.   |
| Customer Order State                      | Retailer defined state for an Order. Possible values include Pending, Partially Delivered, Complete, and Canceled.  |
| Customer Service Request                  | Activity request transactions for a customer service center.  |
| Employee Labor                            | Information regarding employee labor activity.  |
| Exchange Rate Currency Day                | Daily exchange rates for specific currencies.   |
| Inventory Control Document                | Record of the movement of merchandise or supply Stock Items.  |
| Inventory Control Document Line Item      | Detail line on an Inventory Control Document that identifies the Stock item, and unit of measure exchanged, or the freight, charges, taxes, and allowances applicable to a particular inventory control event and action.                                       |
| Inventory Item State                      | Location of SKU Items in inventory by business unit, selling location, inventory location by date.  |
| Market Sales Item Week                    | Sales information for market items obtained from external source.   |
| Purchase Order                            | Order from a business unit to purchase inventory, supplies, or services from a vendor.  |
| Purchase Order Line Item                  | Items, quantities and amounts included in a purchase order.   |
| Purchase Order Line Item State            | State of a Purchase Order line item for a given period.   |
| Purchase Order State                      | State of a Purchase Order for a given period.   |
| Retail Sale Return Line Item              | A line item component of a RETAIL TRANSACTION that records the exchange in ownership of a merchandise item (for example, a sale or return) or the sale or refund related to a service.  |
| Retail Sale Return Promotion Line Item    | A detail line item of TRANSACTION that records the crediting or debiting of a CUSTOMER PROMOTIONAL ACCOUNT with points, dollars, or miles.  |
| Retail Tender History                     | Point of Sale Tender information by employee, tender type, business unit, day. Records of tender in and tender out.   |
| Retail Tender Line Item                   | A line item component of a retail transaction that records the settlement of that transaction with an offsetting, valid tender type.  |
| Retail Transaction                        | A type of transaction that records the business conducted between the retail enterprise and another party involving the exchange in ownership or accountability, or both, for merchandise or tender, or both, or involving the exchange of tender for services. |
| Retail Transaction Associate Assignment   | Employee Associate involved in serving the customer who purchased the merchandise or services identified in the Retail Transaction.   |

**Table 2–22 (Cont.) Base Entity Descriptions**

| <b>Entity</b>   | <b>Description</b>  |
|---|---|
| <a href="#">Retail Transaction Miscellaneous Line Item</a>      | A detail line item of a miscellaneous transaction.  |
| <a href="#">Retail Transaction Line Item</a>                    | A detail line item of a Retail Transaction that records the business conducted between the retail store and another party involving the exchange in ownership or accountability, or both, for merchandise or tender, or both, or involving the exchange of tender for services. |
| <a href="#">Sales Forecast Item Organization Hierarchy Week</a> | Weekly sales forecast information at given levels of Item, and organization hierarchies.  |
| <a href="#">Sales Plan Item Organization Hierarchy Week</a>     | Weekly sales plan including Returns, Cost of Sales, Promotion, Clearance, at given levels of Item and Organization hierarchies.   |
| <a href="#">Tender Change Line Item</a>                         | Holds details of tender change in a transaction.  |
| <a href="#">Till History</a>                                    | A collection of monetary and operational totals used to track the activity volume of a till between Till Settlement Transactions.   |
| <a href="#">Till Tax History</a>                                | A collection of tax totals for a tax authority by till for a tender reconciliation period.  |
| <a href="#">Till Tender History</a>                             | A collection of tender type accumulators by till tender accumulation period used to support till tender accountability.   |
| <a href="#">Vendor SKU Cost Profit Day</a>                      | Cost change information for a SKU item, vendor, and business unit combination on a given day.   |

## Certificate Escheated Day

The Certificate Escheated Day entity is the date and count of escheated vouchers.

## Customer Order

The Customer Order entity is an order placed by a Customer for merchandise or services to be provided at some future date and time.

[Figure 2–12, "Customer Order Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–12 Customer Order Entity Relationships**

## Customer Order Line Item

The Customer Order Line Item entity is the line item components of a Customer placed order.

[Figure 2–13, "Customer Order Line Item Entity Relationships"](#) shows how this entity relates to other entities.

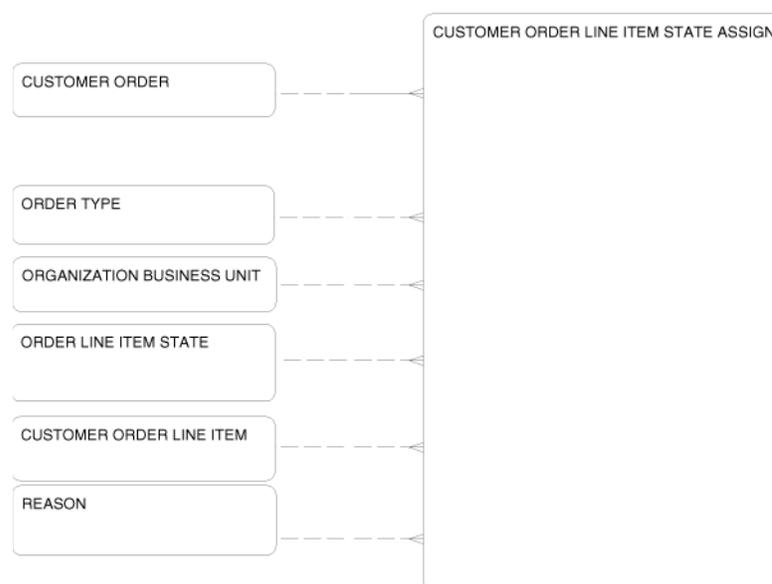
**Figure 2–13 Customer Order Line Item Entity Relationships**



### Customer Order Line Item State Assignment

The Customer Order Line Item State Assignment entity is the state of a Customer Order line item being for a given period. Examples of states include pending, back order, billed, and 'booked.

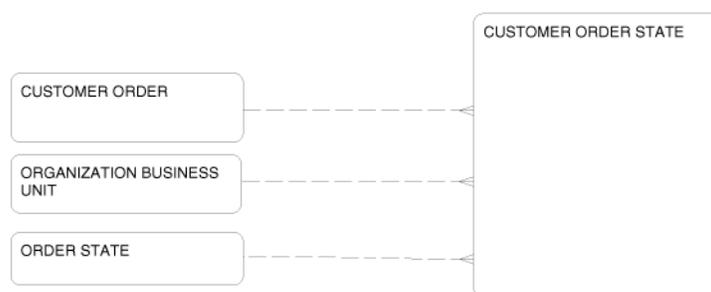
Figure 2–14, "Customer Order Line Item State Assignment Entity Relationships" shows how this entity relates to other entities.

**Figure 2–14 Customer Order Line Item State Assignment Entity Relationships**

## Customer Order State

The Customer Order State entity is the retailer defined state for an Order. Possible values include Pending, Partially Delivered, Complete, and Canceled.

[Figure 2–15, "Customer Order State Entity Relationships"](#) shows how this entity relates to other entities.

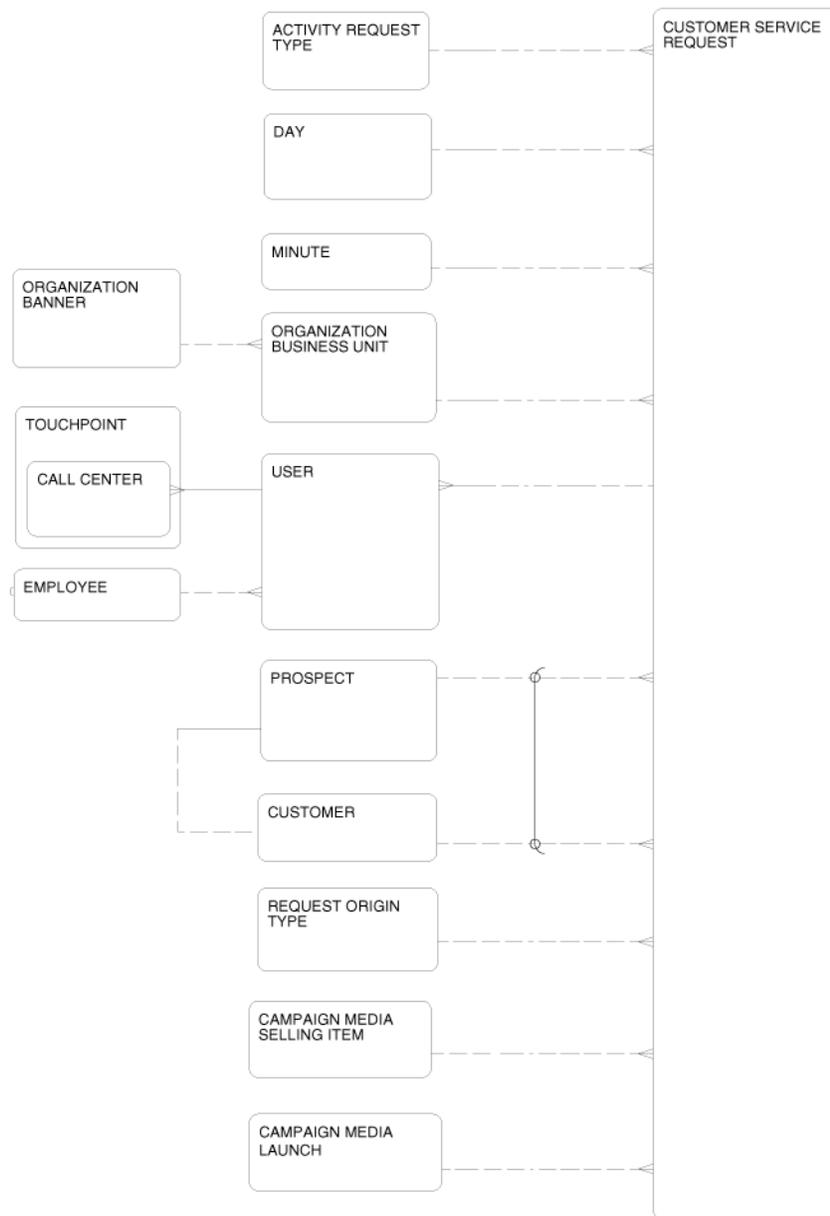
**Figure 2–15 Customer Order State Entity Relationships**

## Customer Service Request

The Customer Service Request entity is activity request transactions for a customer service center.

[Figure 2–16, "Customer Service Request Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–16 Customer Service Request Entity Relationships**



## Employee Labor

The Employee Labor entity is information regarding employee labor activity.

[Figure 2–17, "Employee Labor Entity Relationships"](#) shows how this entity relates to other entities.

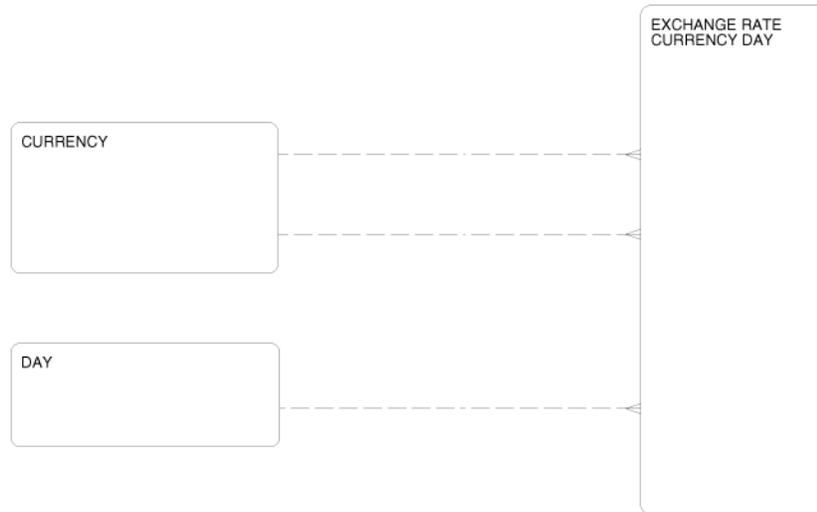
**Figure 2–17 Employee Labor Entity Relationships**

## Exchange Rate Currency Day

The Exchange Rate Currency Day entity is the daily exchange rates for specific currencies.

Figure 2–17, "Employee Labor Entity Relationships" shows how this entity relates to other entities.

**Figure 2–18 Exchange Rate Currency Day**

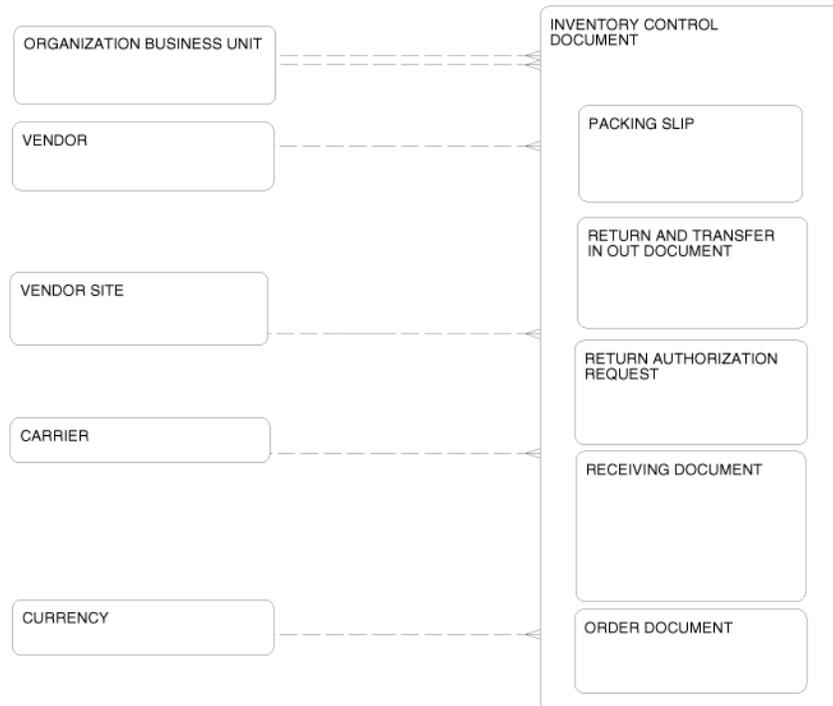


### Inventory Control Document

The Inventory Control Document entity is a record of the movement of merchandise or supply Stock Items.

[Figure 2–19, "Inventory Control Document Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–19 Inventory Control Document Entity Relationships**



## Inventory Control Document Line Item

The Inventory Control Document Line Item entity is a detail line on an Inventory Control Document that identifies the Stock item, and unit of measure exchanged, or the freight, charges, taxes, and allowances applicable to a particular inventory control event and action.

Figure 2–20, "Inventory Control Document Line Item Entity Relationships" shows how this entity relates to other entities.

**Figure 2–20** *Inventory Control Document Line Item Entity Relationships*

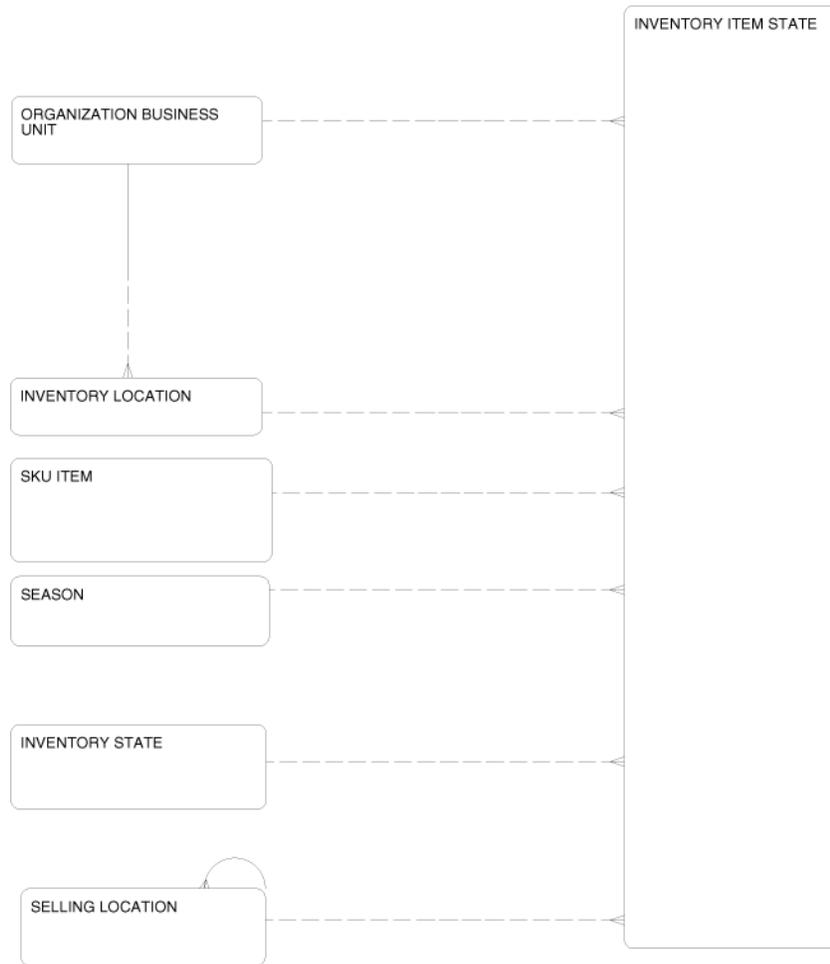


## Inventory Item State

The Inventory Item State entity is the location of SKU Items in inventory by business unit, selling location, inventory location by date.

Figure 2–21, "Inventory Item State Entity Relationships" shows how this entity relates to other entities.

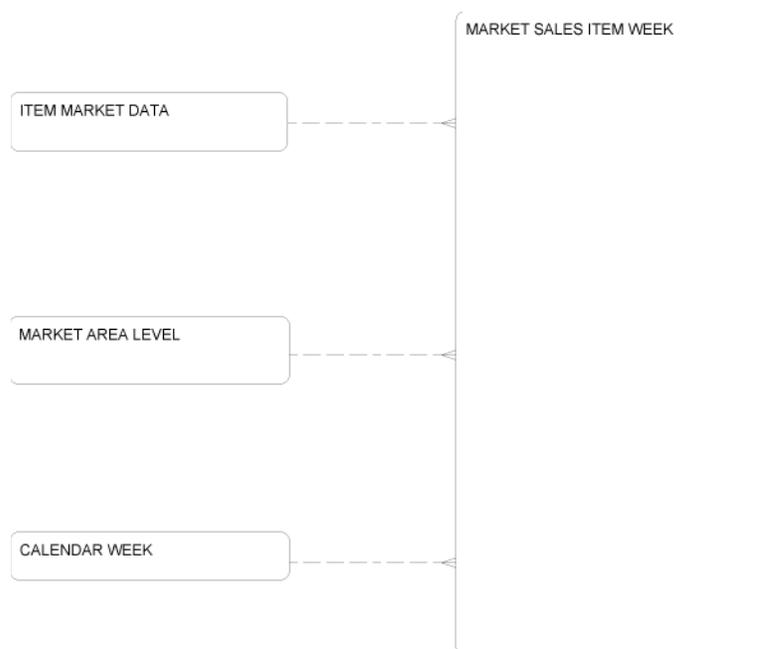
**Figure 2–21 Inventory Item State Entity Relationships**



## Market Sales Item Week

The Market Sales Item Week entity is sales information for market items obtained from external source.

Figure 2–22, "Market Sales Item Week Entity Relationships" shows how this entity relates to other entities.

**Figure 2–22 Market Sales Item Week Entity Relationships**

## Purchase Order

The Purchase Order entity is an order from a business unit to purchase inventory, supplies, or services from a vendor.

[Figure 2–23, "Purchase Order Entity Relationships"](#) shows how this entity relates to other entities.

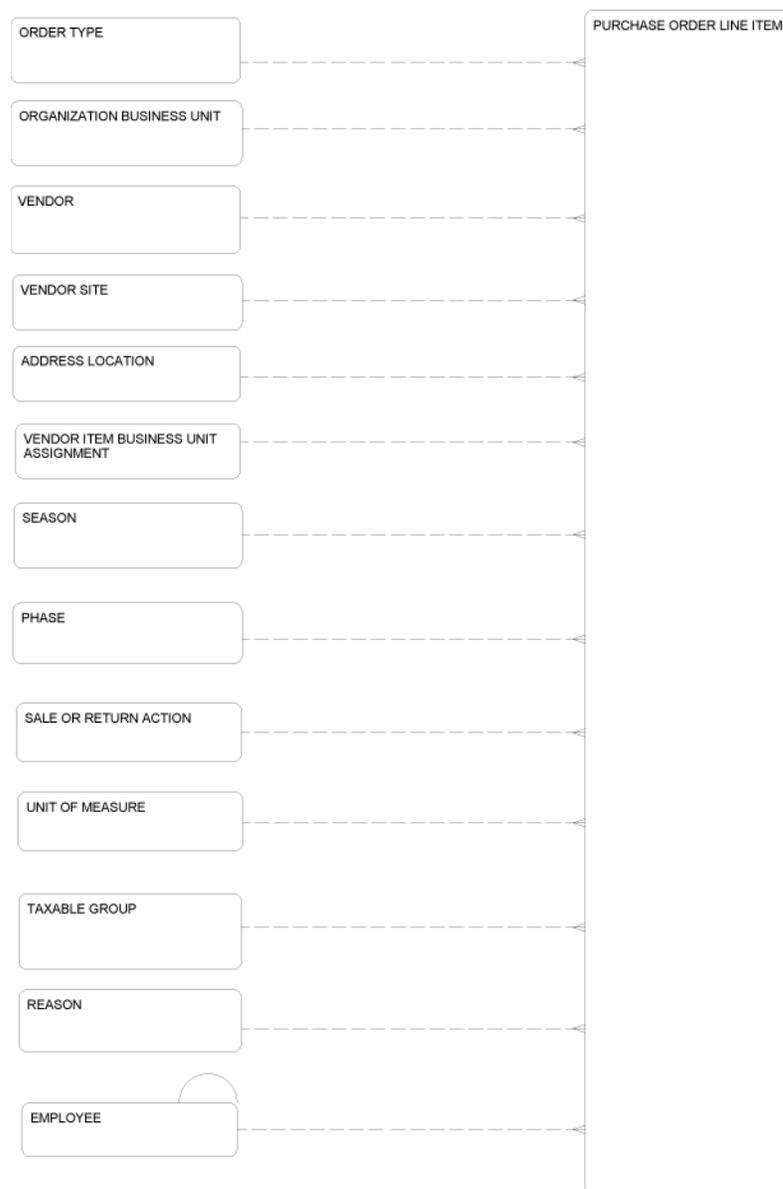
**Figure 2–23 Purchase Order Entity Relationships**



## Purchase Order Line Item

The Purchase Order Line Item entity is items, quantities and amounts included in a purchase order.

Figure 2–24, "Purchase Order Line Item Entity Relationships" shows how this entity relates to other entities.

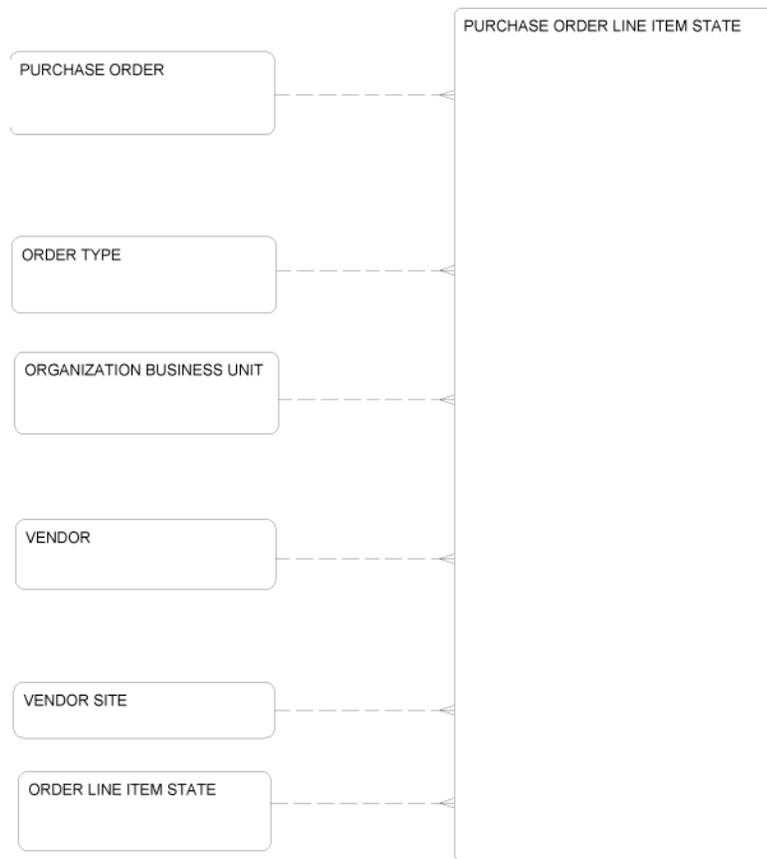
**Figure 2–24 Purchase Order Line Item Entity Relationships**

## Purchase Order Line Item State

The Purchase Order Line Item entity is the state of a Purchase Order line item for a given period.

[Figure 2–25, "Purchase Order Line Item State Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–25 Purchase Order Line Item State Entity Relationships**



## Purchase Order State

The Purchase Order State entity is the state of a Purchase Order for a given period.

[Figure 2–26, "Purchase Order State Entity Relationships"](#) shows how this entity relates to other entities.

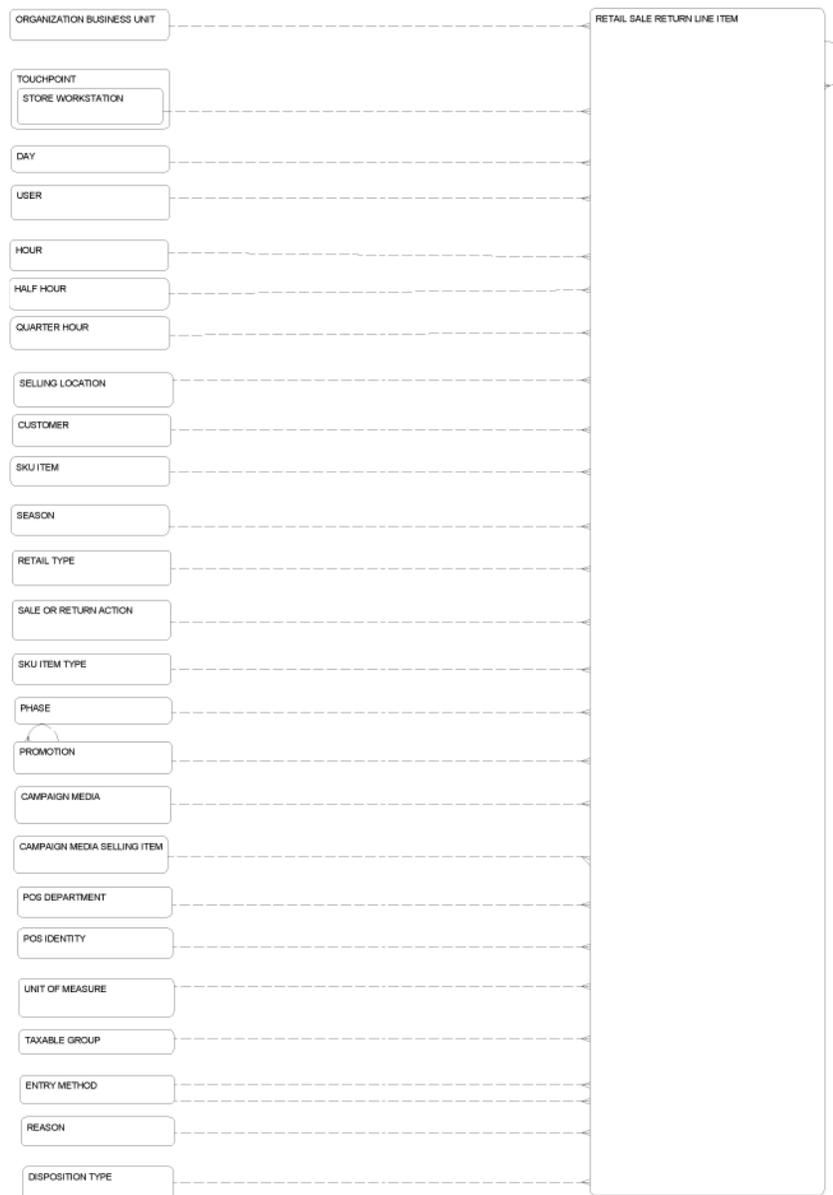
**Figure 2–26 Purchase Order State Entity Relationships**

## Retail Sale Return Line Item

The Retail Sale Return Line Item entity is a line item component of a Retail Transaction that records the exchange in ownership of a merchandise item (for example, a sale or return) or the sale or refund related to a service.

[Figure 2–27, "Retail Sale Return Line Item Entity Relationships"](#) shows how this entity relates to other entities.

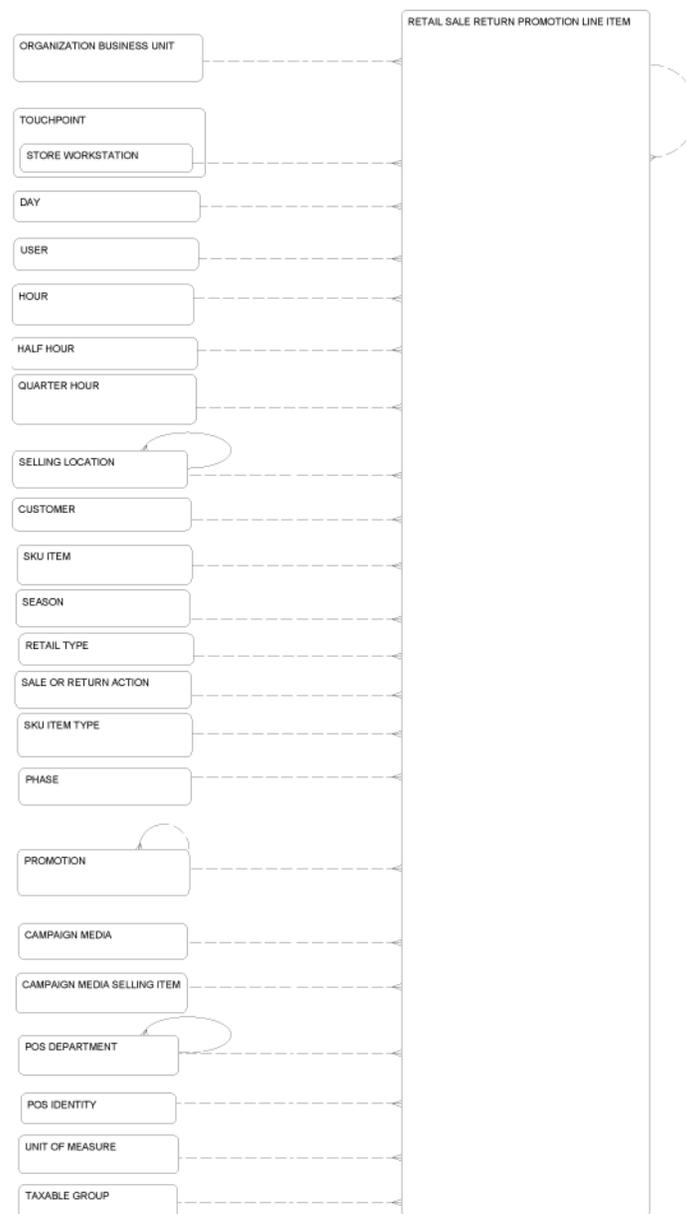
**Figure 2–27 Retail Sale Return Line Item Entity Relationships**



### Retail Sale Return Promotion Line Item

A Retail Sale Return Promotion Line Item entity is a detail line item of TRANSACTION that records the crediting or debiting of a CUSTOMER PROMOTIONAL ACCOUNT with points, dollars, or miles.

Figure 2–28, "Retail Sale Return Promotion Line Item Entity Relationships" shows how this entity relates to other entities.

**Figure 2–28 Retail Sale Return Promotion Line Item Entity Relationships**

## Retail Tender History

A Retail Tender History entity is a Point of Sale Tender information by employee, tender type, business unit, day. This entity keeps records of tender in and tender out.

[Figure 2–29, "Retail Tender History Entity Relationships"](#) shows how this entity relates to other entities.

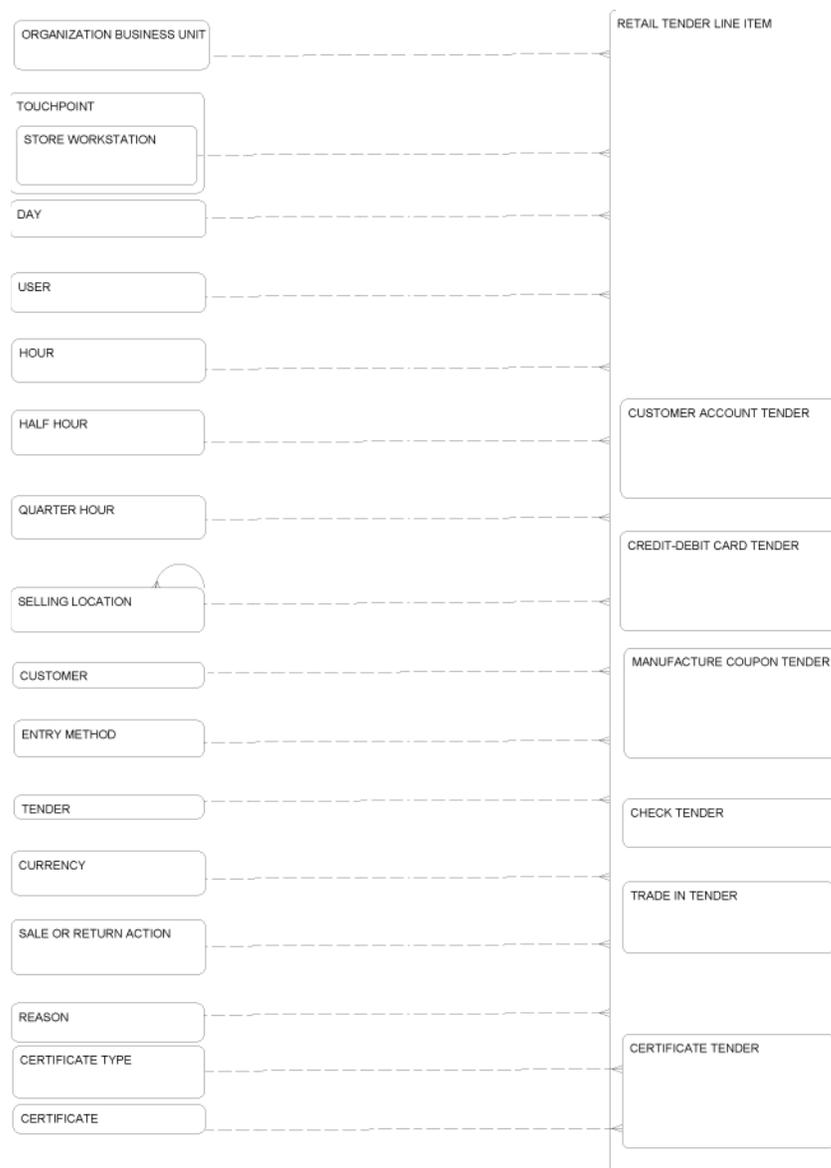
**Figure 2–29 Retail Tender History Entity Relationships**



### Retail Tender Line Item

A Retail Tender Line Item entity is a line item component of a retail transaction that records the settlement of that transaction with an offsetting, valid tender type.

[Figure 2–30, "Retail Tender Line Item Entity Relationships"](#) shows how this entity relates to other entities.

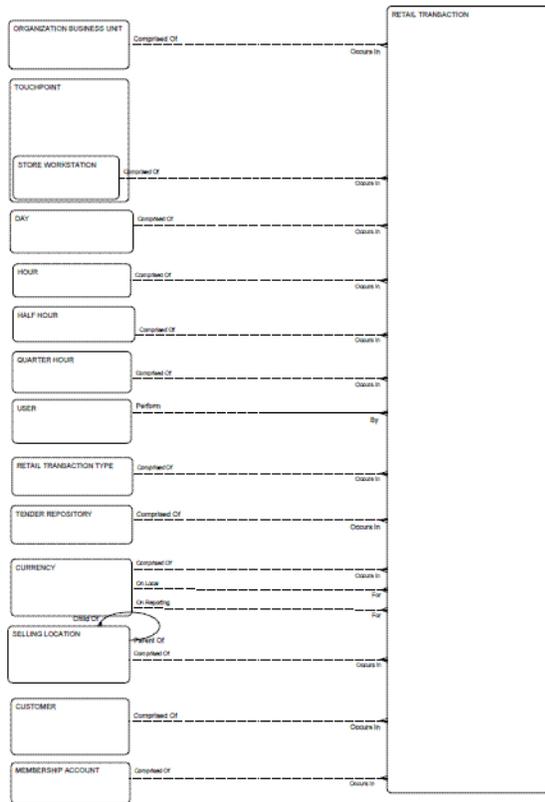
**Figure 2–30 Retail Tender Line Item Entity Relationships**

## Retail Transaction

A Retail Transaction entity is type of transaction that records the business conducted between the retail enterprise and another party involving the exchange in ownership or accountability, or both, for merchandise or tender, or both, or involving the exchange of tender for services.

[Figure 2–31, "Retail Transaction Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–31 Retail Transaction Entity Relationships**



## Retail Transaction Associate Assignment

A Retail Transaction Associate Assignment is an Employee Associate involved in serving the customer who purchased the merchandise or services identified in the Retail Transaction.

Figure 2–32, "Retail Transaction Associate Assignment Entity Relationships" shows how this entity relates to other entities.

**Figure 2–32 Retail Transaction Associate Assignment Entity Relationships**



## Retail Transaction Miscellaneous Line Item

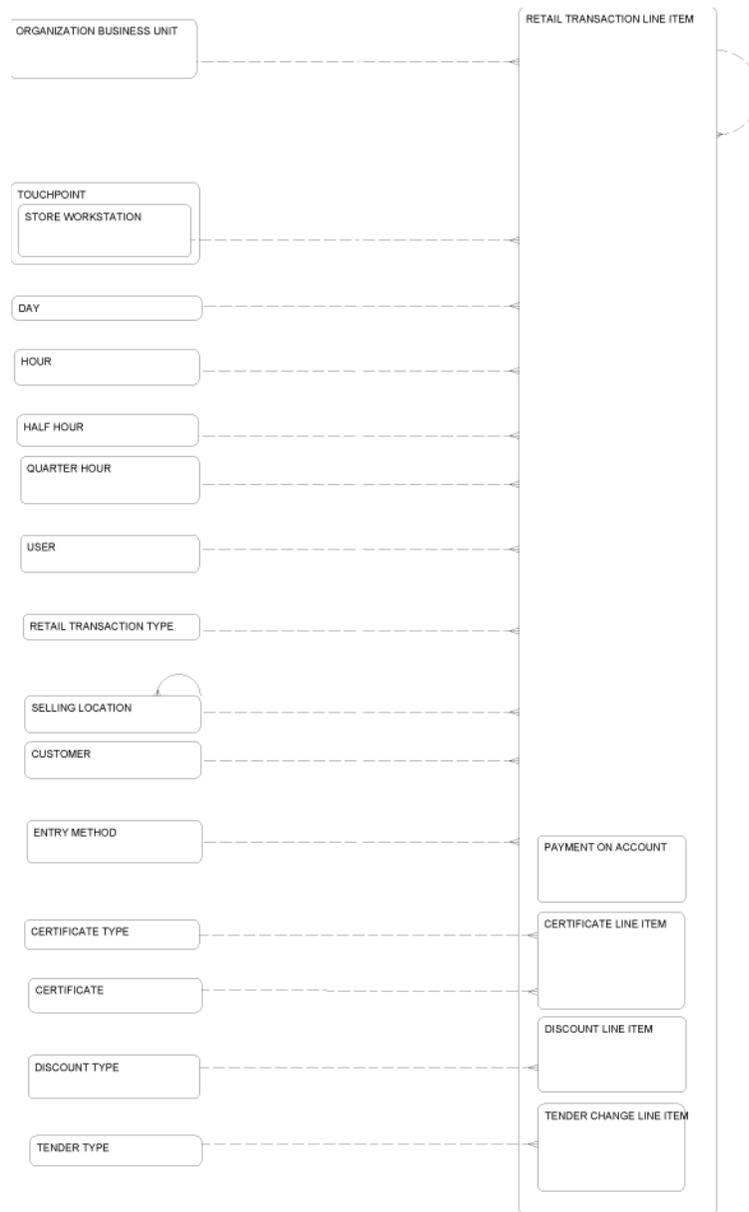
A Retail Transaction Miscellaneous Line Item is a detail line item of a Retail Transaction. This entity records the business conducted between the retail store and another party involving the exchange in ownership or accountability for merchandise or tender or involving the exchange of tender for services.

## Retail Transaction Line Item

A Retail Transaction Line Item entity is a detail line item of a Retail Transaction that records the business conducted between the retail store and another party involving the exchange in ownership or accountability, or both, for merchandise or tender, or both, or involving the exchange of tender for services.

[Figure 2–33, "Retail Transaction Line Item Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–33 Retail Transaction Line Item Entity Relationships**

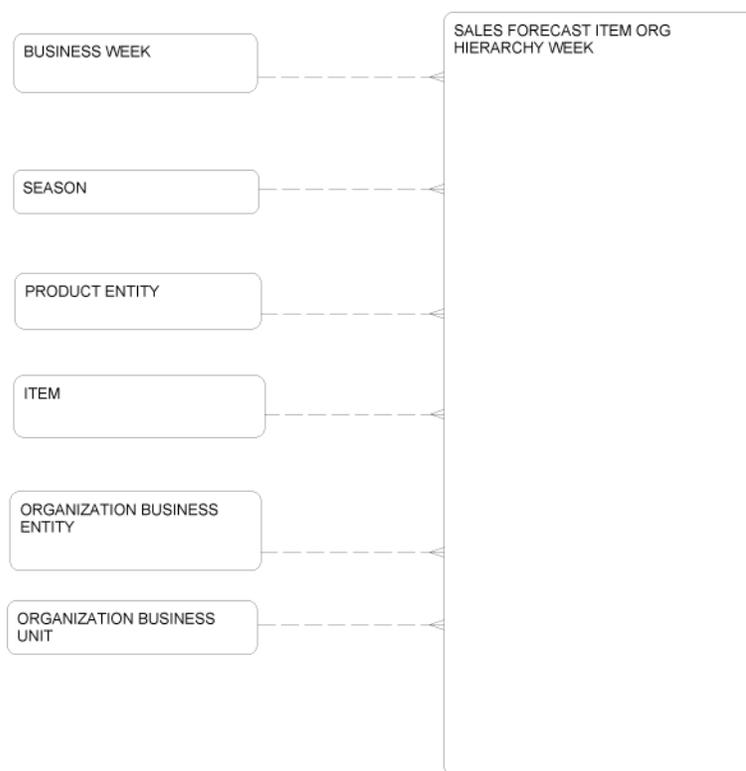


### Sales Forecast Item Organization Hierarchy Week

A Sales Forecast Item Organization Hierarchy entity is weekly sales forecast Information at given levels of Item, and organization hierarchies.

Figure 2–34, "Sales Forecast Item Organization Hierarchy Week Entity Relationships" shows how this entity relates to other entities.

**Figure 2–34 Sales Forecast Item Organization Hierarchy Week Entity Relationships**

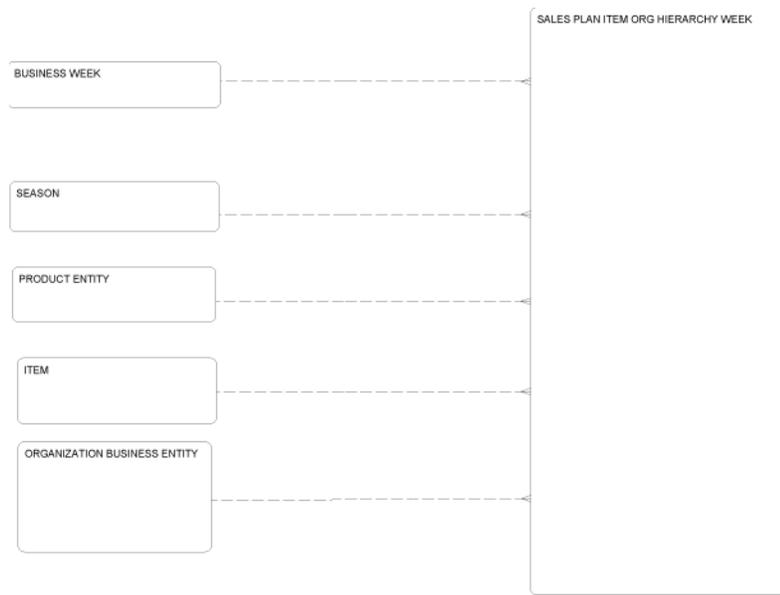


### Sales Plan Item Organization Hierarchy Week

A Sales Plan Organization Hierarchy Week entity is weekly sales plan including Returns, Cost of Sales, Promotion, Clearance, at given levels of Item and Organization hierarchies.

Figure 2–35, "Sales Plan Item Organization Hierarchy Week Entity Relationships" shows how this entity relates to other entities.

**Figure 2–35 Sales Plan Item Organization Hierarchy Week Entity Relationships**



### Tender Change Line Item

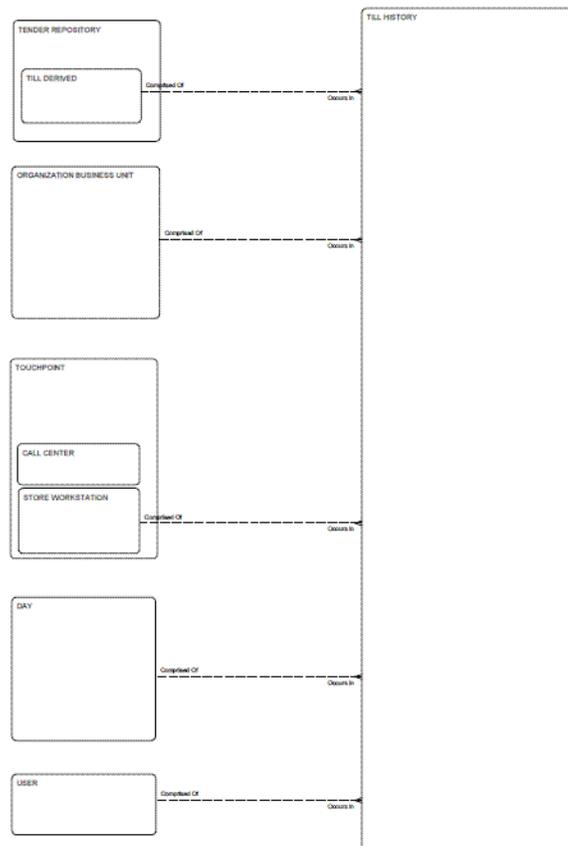
A Tender Change Line Item holds details of tender change in a transaction.

### Till History

A Till History entity is a collection of monetary and operational totals used to track the activity volume of a till between Till Settlement Transactions.

[Figure 2–36, "Till History Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–36 Till History Entity Relationships**

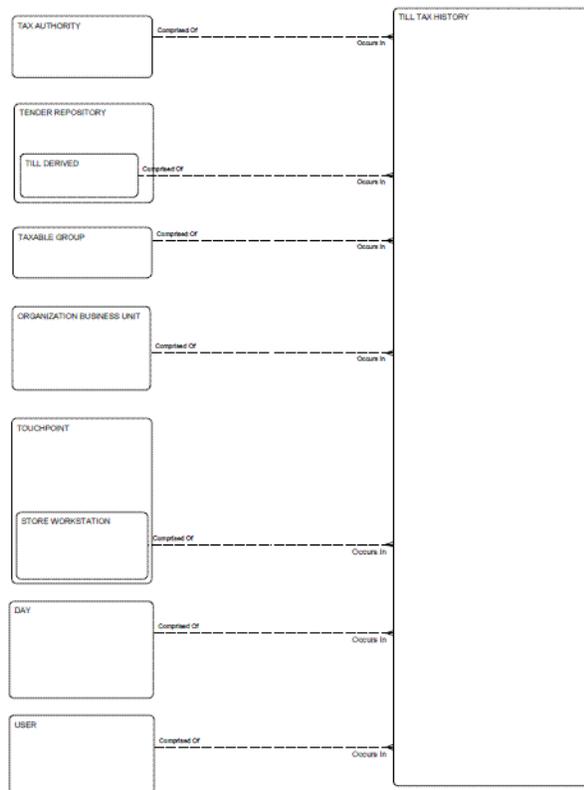


## Till Tax History

A Till Tax History entity is a collection of tax totals for a tax authority by till for a tender reconciliation period.

[Figure 2–37, "Till Tax History Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–37 Till Tax History Entity Relationships**

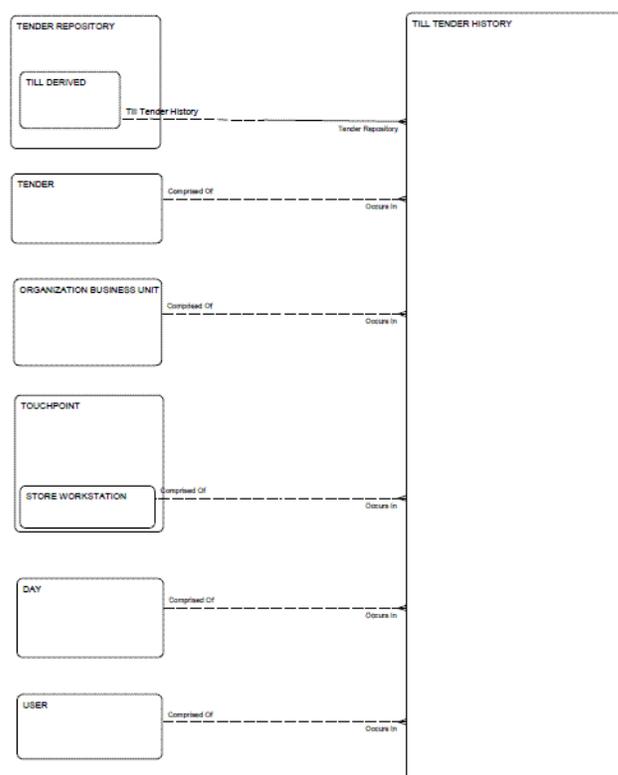


## Till Tender History

A Till Tender History entity is a collection of tender type accumulators by till tender accumulation period used to support till tender accountability.

Figure 2–38, "Till Tender History Entity Relationships" shows how this entity relates to other entities.

**Figure 2–38 Till Tender History Entity Relationships**

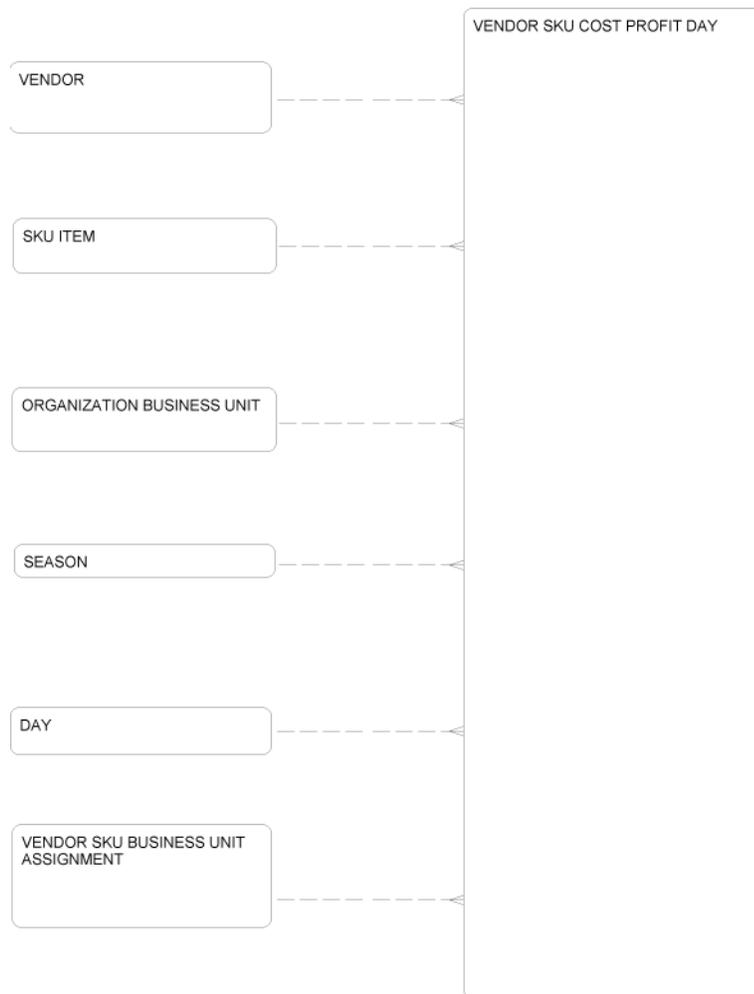


## Vendor SKU Cost Profit Day

A Vendor SKU Cost Profit Day entity is cost change information for a SKU item, vendor, and business unit combination on a given day.

Figure 2–39, "Vendor SKU Cost Profit Day Entity Relationships" shows how this entity relates to other entities.

**Figure 2–39 Vendor SKU Cost Profit Day Entity Relationships**



## Derived Entities

Derived entities contain information drawn from one or more base entities, and contains denormalized or transposed data. Granularity is partially aggregated, typically at day level, but in some cases at quarter hour level or partially aggregated transactional data from the base entities.

[Table 2–23, "Derived Entity Descriptions"](#) lists and describes the derived entities and links to individual topics for each entity that provides information about how each entity relates to other entities.

**Table 2–23 Derived Entity Descriptions**

| Entity   | Description  |
|--|--|
| <a href="#">Certificate Activity Transaction Derived</a> | This table is populated from retail transaction line item sub type certificate for issue and retail tender line item sub type certificate tender for redemption. |
| <a href="#">Customer Employee Relationship Day</a>       | Cross reference of employee transactions by customer.  |

**Table 2–23 (Cont.) Derived Entity Descriptions**

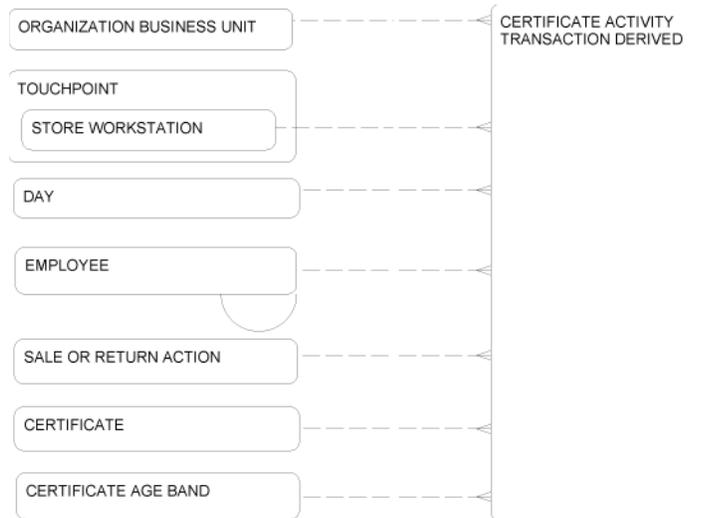
| <b>Entity</b>                            | <b>Description</b>   |
|--|--|
| Customer Order Item Day Derived          | Daily record of customer orders by SKU item for a business unit.   |
| Customer Order Line Item State Derived   | State of a Customer Order Line Item State; for example, pick, backorder, altered, or return for a given time period.   |
| Customer RFMP Score                      | Recency, Frequency, Monetary, and Profitability Value Score of a customer, by business unit.   |
| Customer SKU Sale Return Day Derived     | SKU item purchases and returns by customer for a business unit.  |
| Catalog Request by Day Derived           | Summary of Customer Service Requests in which a catalogue was requested by a customer or prospect by day and business unit.  |
| Inventory Adjustment by Item Day Derived | Inventory adjustment information at the item-business unit-day-reason level.   |
| Inventory Unavailable Item Day           | Details of the items marked as nonsellable at day level.   |
| Inventory Position by Item Day Derived   | Status and value of Inventory; for example: stock on hand, on order for a business unit, SKU item and day.   |
| POS Tender Flow                          | Point of Sale Tender transactions by minute and tender type for a workstation in a Business Unit.  |
| POS Transaction Flow                     | Point of Sale Retail Transactions by minute and tender type for a workstation in a Business Unit.  |
| Retail Sale Return Item Day Derived      | Summary of SKU Item sales and returns by day, business unit and optionally by promotional campaign.  |
| Space Utilization Item Day Derived       | Summary of allocated space by item. The table is updated from inventory item state. 'Max' and 'Min' are populated from the recursive selling location.   |
| Till Derived                             | Describes the actions that happen during a drawer insert which is operationally associated with a Workstation and, optionally, an Employee. A Till Derived entity is used to keep cash and other Tender collected through Retail Transactions and used to make change. |

## Certificate Activity Transaction Derived

The Certification Activity Transaction Derived entity is a table that is populated from retail transaction line item sub type certificate for issue and retail tender line item sub type certificate tender for redemption.

Figure 2–40, "Certificate Activity Transaction Derived Entity Relationships" shows how this entity relates to other entities.

**Figure 2–40 Certificate Activity Transaction Derived Entity Relationships**

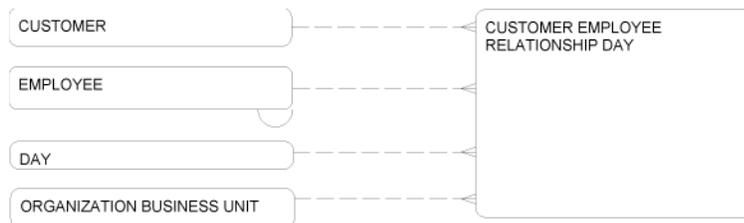


### Customer Employee Relationship Day

The Customer Employee Relationship Day entity is a cross reference of employee transactions by customer.

[Figure 2–41, "Customer Employee Relationship Day Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–41 Customer Employee Relationship Day Entity Relationships**

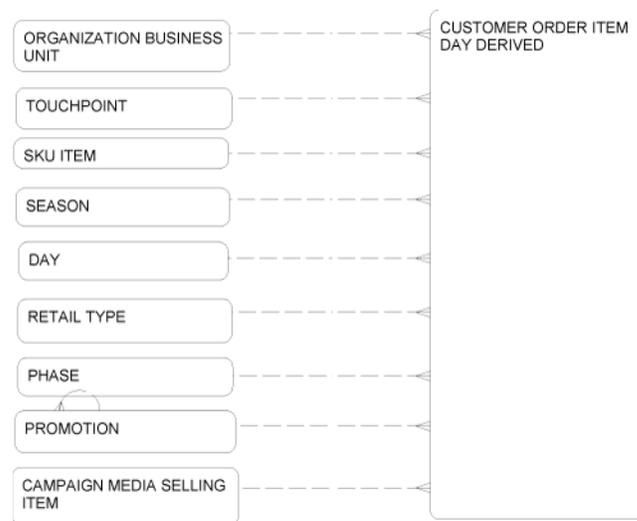


### Customer Order Item Day Derived

The Customer Order Item Day Derived entity is a daily record of customer orders by SKU item for a business unit.

[Figure 2–42, "Customer Order Item Day Derived Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–42 Customer Order Item Day Derived Entity Relationships**

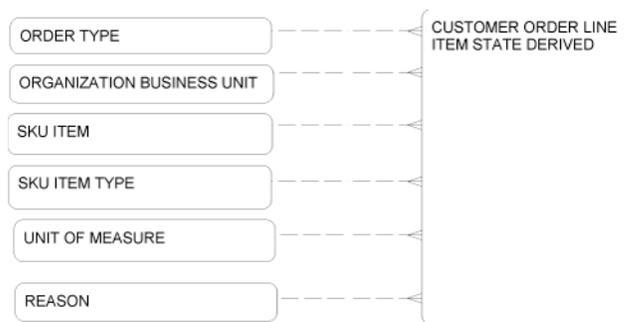


### Customer Order Line Item State Derived

The Customer Order Line Item State Derived entity is the state of a Customer Order Line Item State; for example, pick, backorder, altered, or return for a given time period.

Figure 2–43, "Customer Order Line Item State Derived Entity Relationships" shows how this entity relates to other entities.

**Figure 2–43 Customer Order Line Item State Derived Entity Relationships**

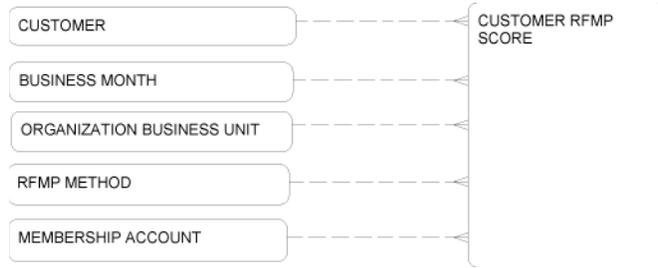


### Customer RFMP Score

The Customer RFMP Score entity is the Recency, Frequency, Monetary, and Profitability Value Score of a customer, by business unit.

Figure 2–44, "Customer RFMP Score Entity Relationships" shows how this entity relates to other entities.

**Figure 2–44 Customer RFMP Score Entity Relationships**

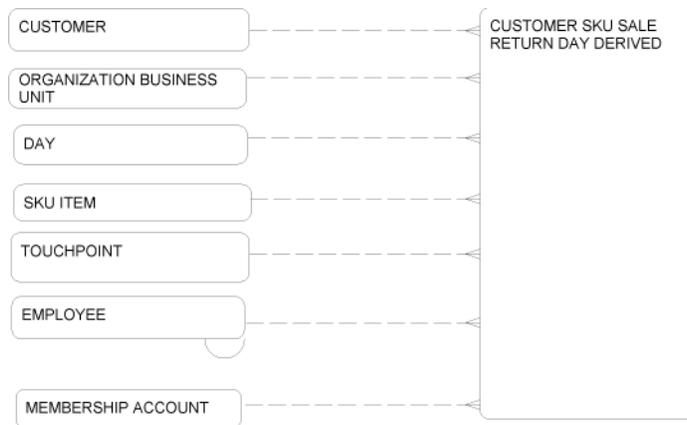


## Customer SKU Sale Return Day Derived

The Customer SKU Sale Return Day Derived entity is the SKU item purchases and returns by customer for a business unit.

Figure 2–45, "Customer SKU Sale Return Day Derived Entity Relationships" shows how this entity relates to other entities.

**Figure 2–45 Customer SKU Sale Return Day Derived Entity Relationships**

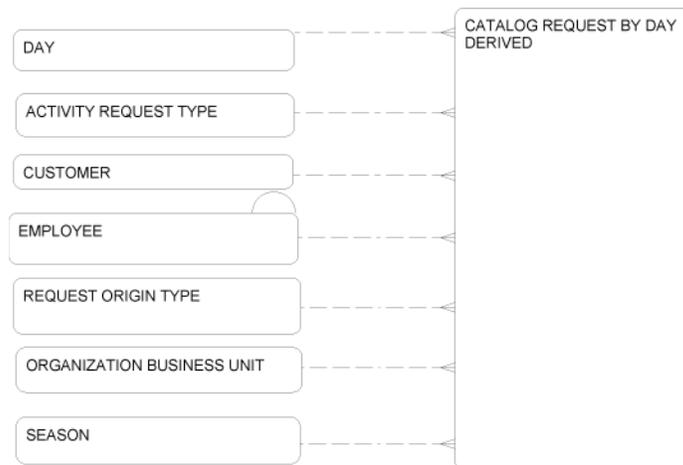


## Catalog Request by Day Derived

The Catalog Request by Day Derived entity is a summary of Customer Service Requests in which a catalogue was requested by a customer or prospect by day and business unit.

Figure 2–46, "Catalog Request by Day Derived Entity Relationships" shows how this entity relates to other entities.

**Figure 2–46 Catalog Request by Day Derived Entity Relationships**

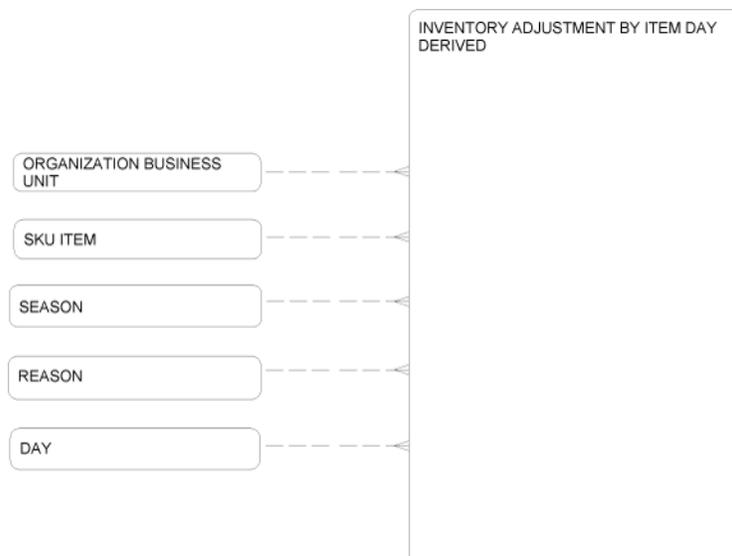


### Inventory Adjustment by Item Day Derived

The Inventory Adjustment by Item Day Derived entity is inventory adjustment information at the item-business unit-day-reason level.

[Figure 2–47, "Inventory Adjustment by Item Day Derived Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–47 Inventory Adjustment by Item Day Derived Entity Relationships**

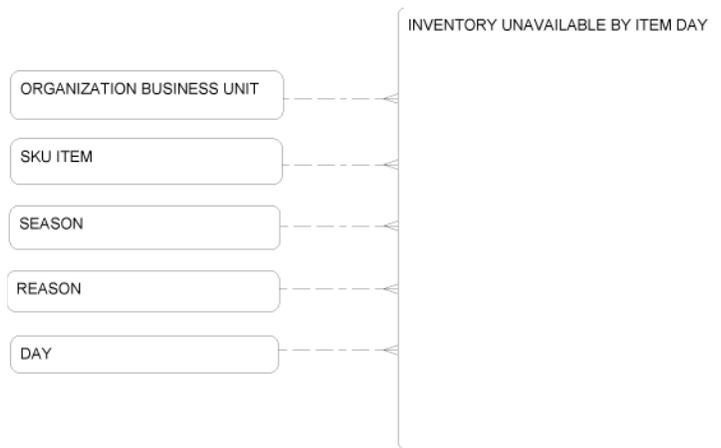


### Inventory Unavailable Item Day

The Inventory Unavailable Item Day entity is the details of the items marked as nonsellable at day level.

[Figure 2–48, "Inventory Unavailable Item Day Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–48 Inventory Unavailable Item Day Entity Relationships**

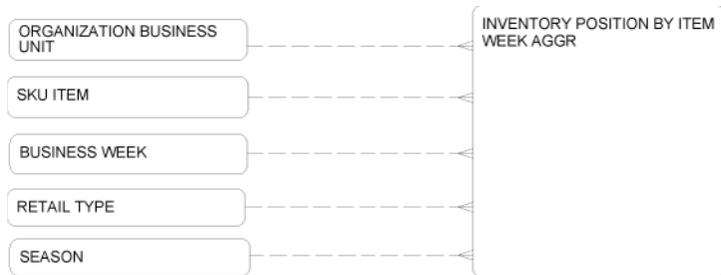


### Inventory Position by Item Day Derived

The Inventory Position by Item Day Derived entity is the status and value of Inventory; for example: stock on hand, on order for a business unit, SKU item and day.

Figure 2–49, "Inventory Position by Item Day Derived Entity Relationships" shows how this entity relates to other entities.

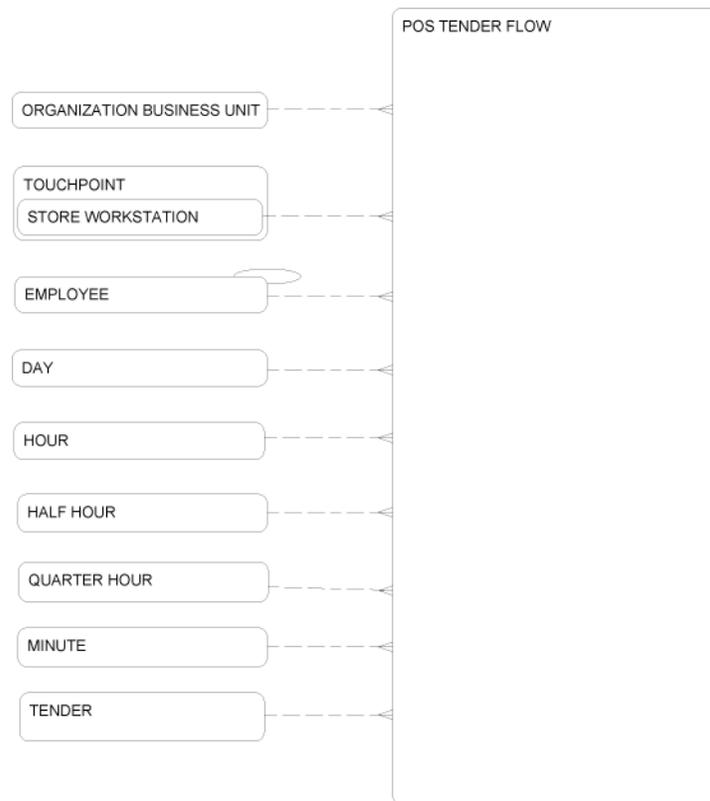
**Figure 2–49 Inventory Position by Item Day Derived Entity Relationships**



### POS Tender Flow

The POS Tender Flow entity is the Point of Sale Tender transactions by minute and tender type for a workstation in a Business Unit.

Figure 2–50, "POS Tender Flow Entity Relationships" shows how this entity relates to other entities.

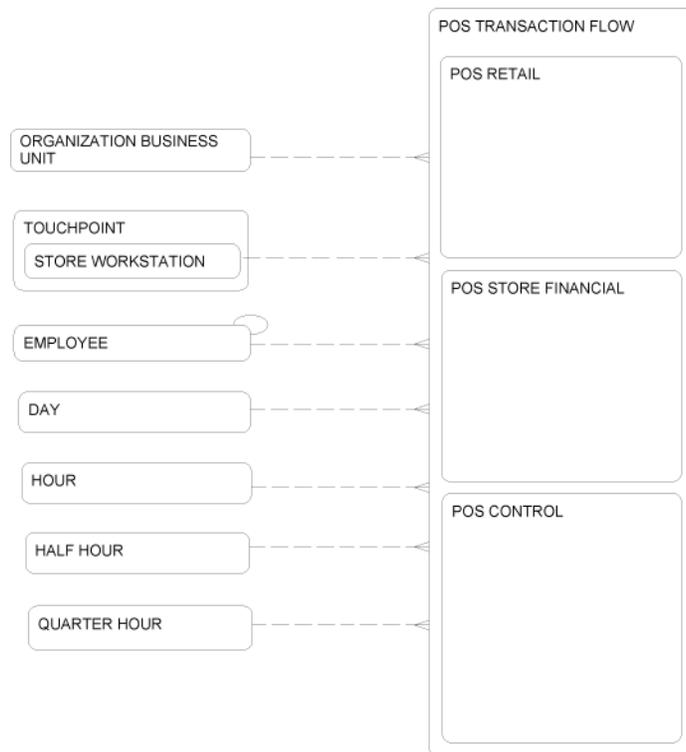
**Figure 2–50 POS Tender Flow Entity Relationships**

## POS Transaction Flow

The POS Transaction Flow entity is Point of Sale Retail Transactions by minute and tender type for a workstation in a Business Unit.

[Figure 2–51, "POS Transaction Flow Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–51 POS Transaction Flow Entity Relationships**

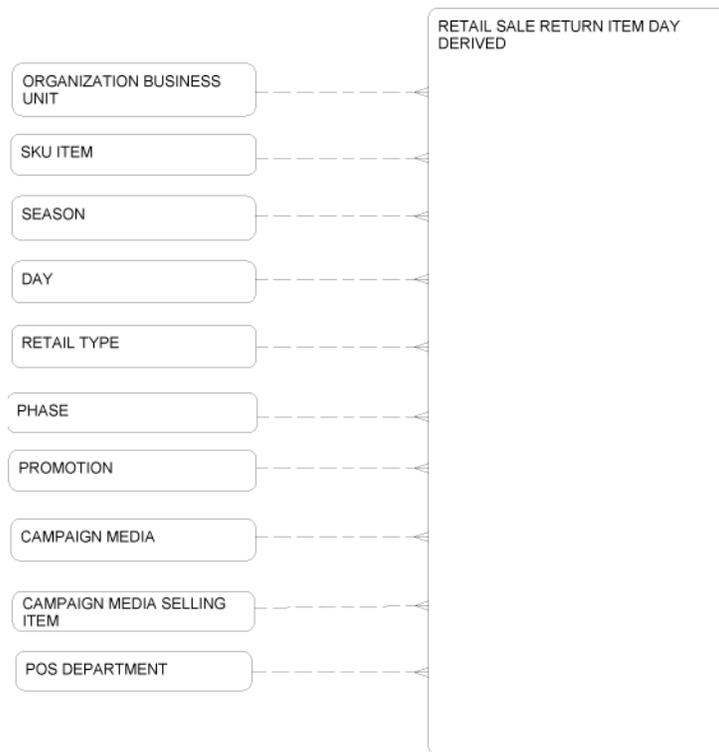


### Retail Sale Return Item Day Derived

The Retail Sale Return Item Day Derived entity is a summary of SKU Item sales and returns by day, business unit and optionally by promotional campaign.

[Figure 2–52, "Retail Sale Return Item Day Derived Entity Relationships"](#) shows how this entity relates to other entities.

**Figure 2–52 Retail Sale Return Item Day Derived Entity Relationships**

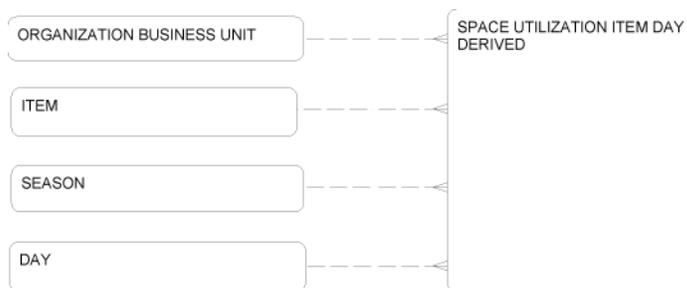


### Space Utilization Item Day Derived

The Space Utilization Item Day Derived entity is a summary of allocated space by item. The table is updated from inventory item state. 'Max' and 'Min' are populated from the recursive selling location.

Figure 2–53, "Space Utilization Item Day Derived Entity Relationships" shows how this entity relates to other entities.

**Figure 2–53 Space Utilization Item Day Derived Entity Relationships**

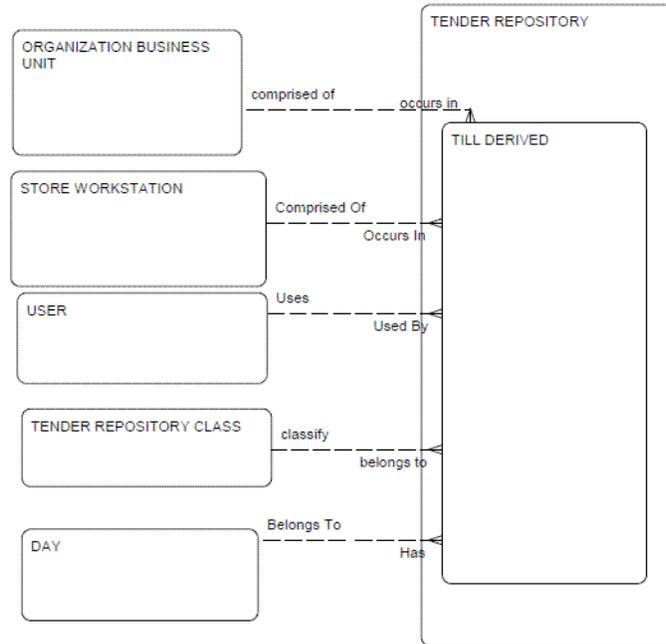


### Till Derived

The Till Revived entity describes the actions that happen during a drawer insert which is operationally associated with a Workstation and, optionally, an Employee. A Till Derived entity is used to keep cash and other Tender collected through Retail Transactions and used to make change.

Figure 2–54 shows how this entity relates to other entities.

**Figure 2–54 Till Derived Entity Relationships**



## Aggregate Entities

Aggregate entities hold data rolled up from the Base or Derived entities at different levels across different dimensional hierarchies.

Table 2–24, "Aggregate Entity Descriptions" lists and briefly describes the aggregate entities and links to individual topics for each entity that provides a more complete description and information about how that entity relates to other entities.

**Table 2–24 Aggregate Entity Descriptions**

| Entity Name   | Brief Description  |
|---|--|
| <a href="#">Carrier Compliance Week Aggr</a>              | Record of a carrier's delivery performance during a given week.  |
| <a href="#">Certificate Activity Day Aggr</a>             | Daily summary of issued and redeemed certificates or vouchers.   |
| <a href="#">Certificate Activity Week Aggr</a>            | A weekly summary of issued and redeemed certificates or vouchers.  |
| <a href="#">Customer Employee Relationship Month Aggr</a> | Monthly cross reference of employee transactions by customer.  |
| <a href="#">Customer Employee Sale Return Week Aggr</a>   | Monthly record of SKU item purchases and returns by a customer and handled by an employee for a business unit. |
| <a href="#">Customer Order Department Day Aggr</a>        | Daily record of customer orders by department.   |
| <a href="#">Customer Order Department Month Aggr</a>      | Monthly record of customer orders by department.   |
| <a href="#">Customer Order Item Month Aggr</a>            | Monthly record of customer orders by SKU item.   |
| <a href="#">Customer Order Item Week Aggr</a>             | Weekly record of customer orders by SKU item.  |
| <a href="#">Customer Order Subclass Day Aggr</a>          | Daily record of customer orders by item subclass.  |
| <a href="#">Customer Order Subclass Month Aggr</a>        | Monthly record of customer orders by item subclass.  |
| <a href="#">Customer Order Subclass Week Aggr</a>         | Weekly record of customer orders by item subclass.   |

**Table 2–24 (Cont.) Aggregate Entity Descriptions**

| <b>Entity Name</b>                                 | <b>Brief Description</b>  |
|--|---|
| Inventory Budget By Week Aggr                      | Weekly record of the budgeted quantity and cost of the inventory.   |
| Inventory Item State History Week                  | Weekly records of SKU item Location in inventory by business unit, selling location, and inventory location.                |
| Inventory Position By Department Day Aggr          | Daily status and value of Inventory; for example, stock on hand, on order for a business unit and SKU Item.                 |
| Inventory Position By Department Week Aggr         | Weekly status and value of Inventory; for example, stock on hand, on order for a business unit and SKU Item.                |
| Inventory Position By Item Week Aggr               | Weekly status of Inventory; for example, stock on hand, on order for a business unit and SKU Item.                          |
| Inventory Position Subclass Day Aggr               | Daily status and value of Inventory; for example, stock on hand, on order for a business unit and item subclass.            |
| Inventory Position Subclass Week Aggr              | Weekly status and value of Inventory; for example, stock on hand, on order for a business unit and Item Subclass.           |
| Inventory Receipt By Item Day Aggr                 | Daily record of inventory receipts by Item and business unit.   |
| Inventory Receipt By Item Week Aggr                | Weekly record of inventory receipts by Item and business unit.  |
| Inventory Receipt By Subclass Day Aggr             | Daily record of inventory receipts by subclass and business unit.   |
| Inventory Receipt By Subclass Week Aggr            | Weekly record of inventory receipts by subclass and business unit.  |
| Inventory Transfer By Item Day Aggr                | Daily record of inventory transfers at the Item, to business unit, from business unit, and transfer type.                   |
| Inventory Transfer By Item Week Aggr               | Weekly record of inventory transfers at the Item, to business unit, from business unit, and transfer type.                  |
| Inventory Transfer By Subclass Day Aggr            | Daily record of Inventory transfer details by item subclass.  |
| Inventory Transfer By Subclass Week Aggr           | Weekly record of Inventory transfer details by item subclass.   |
| Inventory Vendor Compliance Aggr                   | Timeliness, quantity, quality control vendor compliance information at the SKU item-business unit-vendor-season level.      |
| Market Sales Department Week Aggr                  | Details of weekly sales total of market items by department.  |
| Promotion Cost Contribution Week Aggr              | Weekly record of cost contribution of items in a promotion.   |
| Promotion Sales Margin Week Aggr                   | Weekly record of sales and margin of items in promotion.  |
| Retail Markdown Department Day Aggr                | Daily summary markdown details by department.   |
| Retail Markdown Department Week Aggr               | Weekly summary markdown details by department.  |
| Retail Markdown Item Day Aggr                      | Daily summary of markdown details by Item.  |
| Retail Markdown Item Week Aggr                     | Weekly summary of markdown details by Item.   |
| Retail Sale Return Organization Hierarchy Day Aggr | Daily summary of SKU Item sales and returns across organization hierarchy optionally by promotional campaign.               |
| Retail Sale Return Department Day Aggr             | Daily summary of sales and returns by department, optionally by promotional campaign.                                       |
| Retail Sale Return Department Week Aggr            | Weekly summary of sales and returns by department, optionally by promotional campaign.                                      |
| Retail Sale Return Department Month Aggr           | Monthly summary of SKU Item sales and returns for a business unit optionally by promotional campaign.                       |
| Retail Sale Return Item Week Aggr                  | Weekly summary of SKU Item sales and returns for a business unit, optionally by promotional campaign.                       |
| Retail Sale Return Subclass Day Aggr               | Daily summary sales and returns for a business unit by item subclass, optionally by promotional campaign.                   |
| Retail Sale Return Subclass Month Aggr             | Monthly summary of sales and returns for a business unit by item subclass, optionally by promotional campaign.              |
| Retail Sale Return Subclass Week Aggr              | Weekly summary of Item subclass sales and returns for a business unit by item subclass, optionally by promotional campaign. |

**Table 2–24 (Cont.) Aggregate Entity Descriptions**

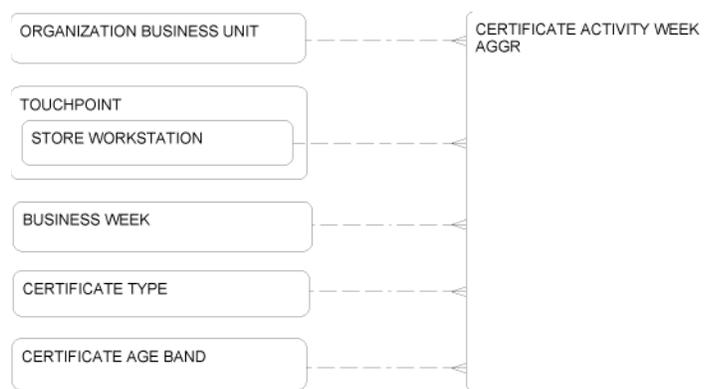
| Entity Name                             | Brief Description  |
|---|--|
| Retail Transaction Emp Workstation Aggr | Summary of POS transaction details; for example, gross positive, tender loans, tender pickups, returns, by week for a given employee or workstation.       |
| Space Utilization Department Day Aggr   | Daily Summary of allocated space by item. Aggregate of Space Utilization Item Day Derived.   |
| Stock Ledger By Subclass Month Aggr     | Monthly inventory values; for example, Begin and End Stock on Hand, Cost amounts, and Markdown Values at Subclass and business unit.                       |
| Stock Ledger By Subclass Week Aggr      | Weekly inventory values; for example, Begin and End Stock on Hand, Cost amounts, and Markdown Values at item Subclass and business unit.                   |
| Till History Workstation Aggr           | A collection of monetary and operational totals used to track the activity volume of a till between Till Settlement Transactions by workstation and week.  |
| Till Tender History Employee Aggr       | A collection of tender type accumulators by till tender accumulation period and employee used to support till tender accountability.                       |
| Vendor Availability Item Day Aggr       | Daily Summary of quantities of SKU item available by vendor and item.  |
| Vendor Compliance Item Week             | Weekly record of timeliness, quantity, quality control vendor compliance information by item, business unit, shipment, and Purchase Order.                 |
| Vendor Compliance Week Aggr             | Weekly record of vendor compliance like, timeliness, quantity, quality control vendor compliance information by business unit shipment and Purchase Order. |
| Vendor Contract Item Day Aggr           | Daily cross-reference of vendor contract details by SKU Item.  |

## Carrier Compliance Week Aggr

The Carrier Compliance Week Aggr entity is a record of a carrier's delivery performance during a given week. Delivery performance is measured by how many times they were late, early or on-time, and how late or early they were in hours or days.

Figure 2–55 shows how this entity relates to other entities.

**Figure 2–55 Carrier Compliance Week Aggr Entity Relationships**

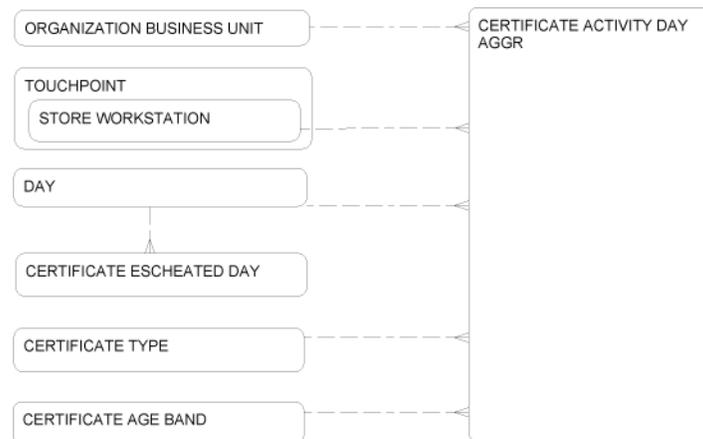


## Certificate Activity Day Aggr

The Certificate Activity Day Aggr entity is a daily summary of issued and redeemed certificates or vouchers. The table contains counts, amounts, and age bands for issued and redeemed vouchers for change of voucher status. Age bands are derived from the Certificate Age Band table where the age of a voucher falls within the limits of the age band. Aggregation is at day level.

Figure 2–56 shows how this entity relates to other entities.

**Figure 2–56 Certificate Activity Day Aggr Entity Relationships**

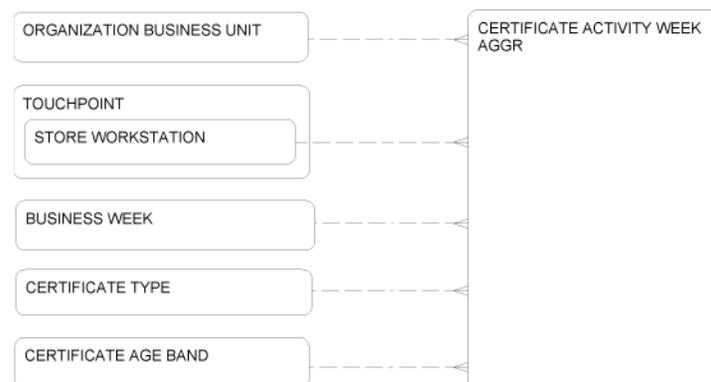


## Certificate Activity Week Aggr

The Certificate Activity Week Aggr entity is a weekly summary of issued and redeemed certificates or vouchers. The table contains counts, amounts, and age bands for issued and redeemed vouchers for change of voucher status. Age bands are derived from the Certificate Age Band table where the age of a voucher falls within the limits of the age band. Aggregation is at week level.

Figure 2–57 shows how this entity relates to other entities.

**Figure 2–57 Certificate Activity Week Aggr Entity Relationships**

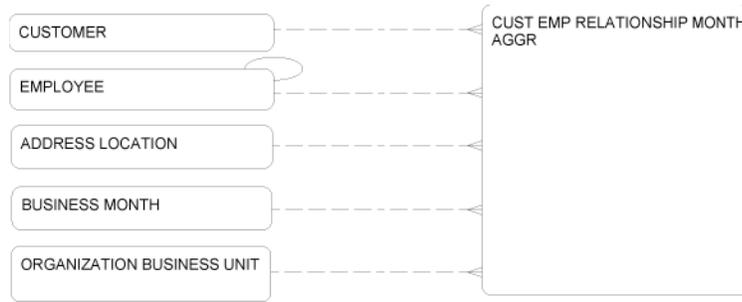


## Customer Employee Relationship Month Aggr

The Customer Employee Relationship Month Aggr entity is a monthly cross reference of employee transactions by customer. This entity is an aggregate of Customer Employee Relationship Day.

Figure 2–58 shows how this entity relates to other entities.

**Figure 2–58 Customer Employee Relationship Month Aggr Entity Relationships**

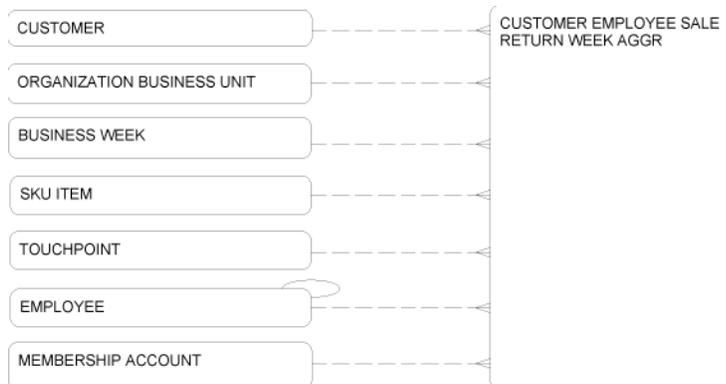


### Customer Employee Sale Return Week Aggr

The Customer Employee Sale Return Week Aggr entity is a monthly record of SKU item purchases and returns by a customer and handled by an employee for a business unit. This entity is an aggregate of Customer SKU Sale Return Day Derived.

Figure 2–59 shows how this entity relates to other entities.

**Figure 2–59 Customer Employee Sale Return Week Aggr Entity Relationships**

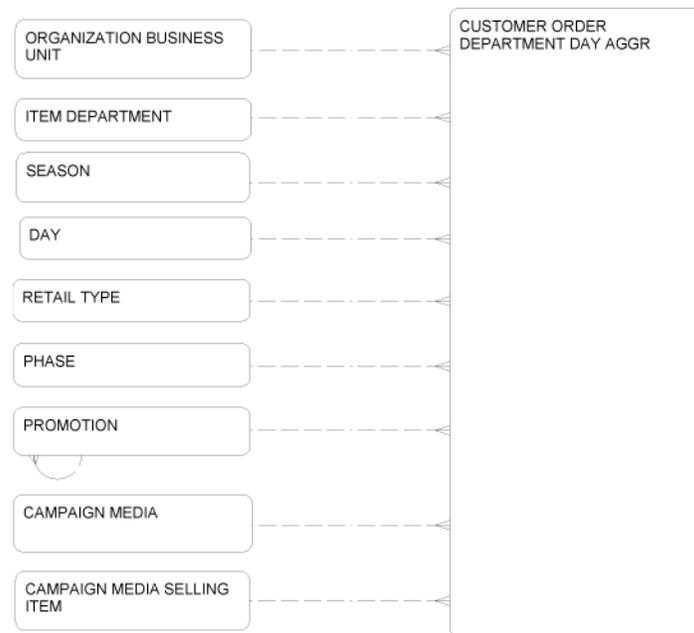


### Customer Order Department Day Aggr

The Customer Order Department Day Aggr entity is a daily record of customer orders by department.

This entity is an aggregate of Customer order Item Day Derived.

Figure 2–60 shows how this entity relates to other entities.

**Figure 2–60 Customer Order Department Day Aggr Entity Relationships**

### Customer Order Department Month Aggr

The Customer Order Department Month Aggr entity is a monthly record of customer orders by department.

This entity is an aggregate of Customer order Item Day.

[Figure 2–61](#) shows how this entity relates to other entities.

**Figure 2–61 Customer Order Department Month Aggr Entity Relationships**

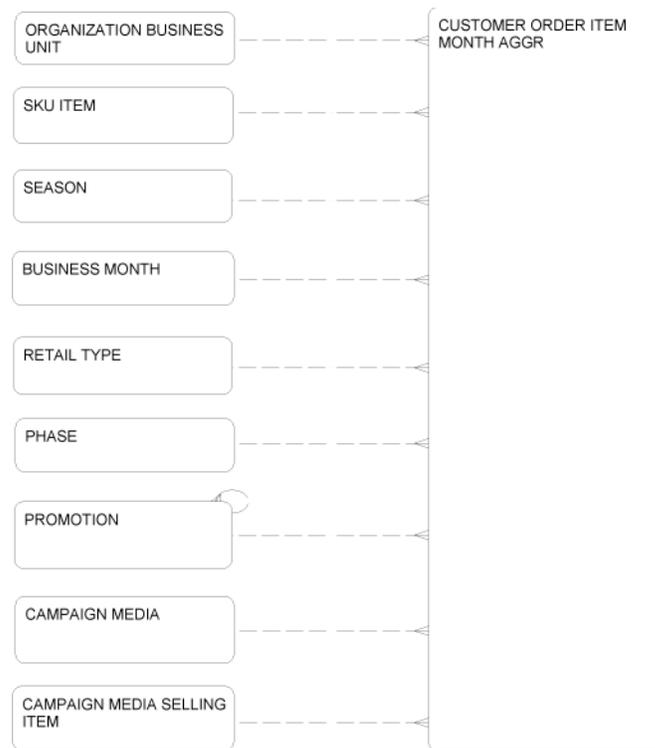


### Customer Order Item Month Aggr

The Customer Order Item Month Aggr entity is a monthly record of customer orders by SKU item.

This entity is an aggregate of Customer order Item Day

[Figure 2–62](#) shows how this entity relates to other entities.

**Figure 2–62 Customer Order Item Month Aggr Entity Relationships**

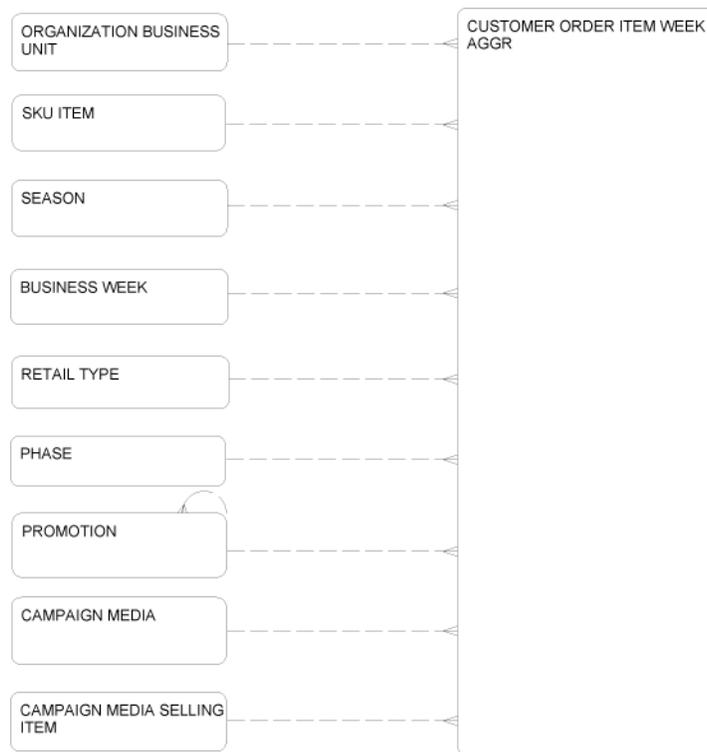
### Customer Order Item Week Aggr

The Customer Order Item Week Aggr entity is a weekly record of customer orders by SKU item.

This entity is an aggregate of Customer order Item Day.

[Figure 2–63](#) shows how this entity relates to other entities.

**Figure 2–63 Customer Order Item Week Aggr Entity Relationship**



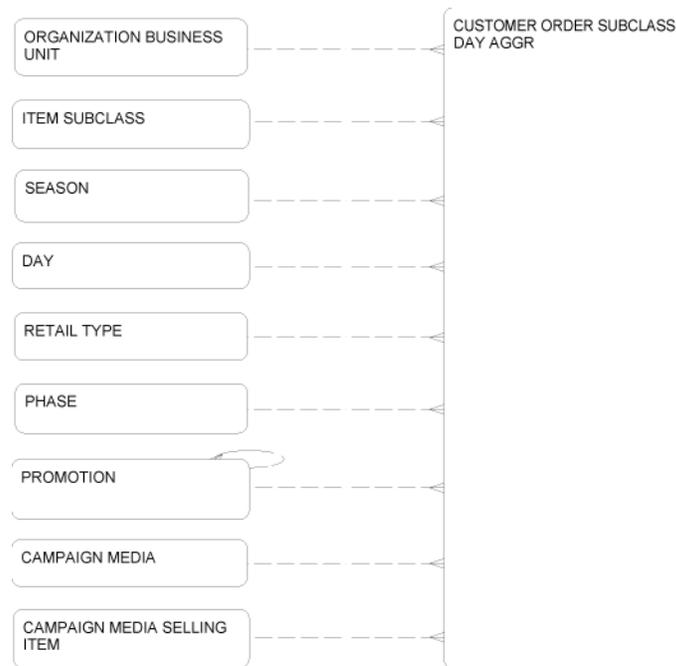
### Customer Order Subclass Day Aggr

The Customer Order Subclass Day Aggr entity is a daily record of customer orders by item subclass.

This entity is an aggregate of Customer order Item Day.

[Figure 2–64](#) shows how this entity relates to other entities.

**Figure 2–64 Customer Order Subclass Day Aggr Entity Relationship**



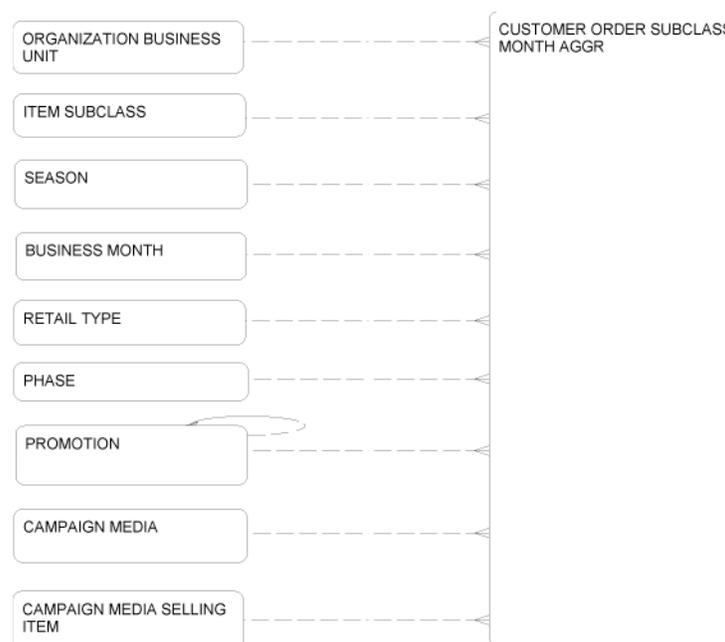
### Customer Order Subclass Month Aggr

The Customer Order Subclass Month Aggr entity is a monthly record of customer orders by item subclass.

This entity is an aggregate of Customer order Item Day.

Figure 2–65 shows how this entity relates to other entities.

**Figure 2–65 Customer Order Subclass Month Aggr Entity Relationship**



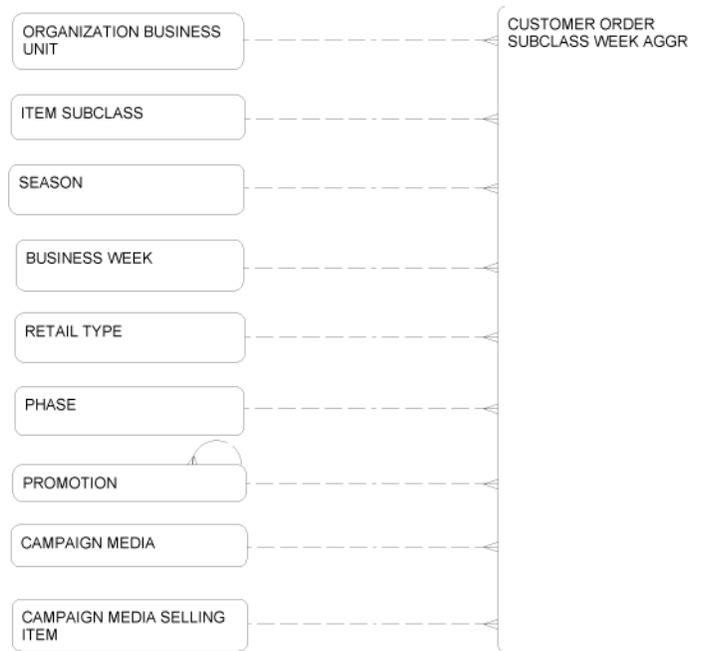
## Customer Order Subclass Week Aggr

The Customer Order Subclass Week Aggr entity is a weekly record of customer orders by item subclass.

This entity is an aggregate of Customer order Item Day.

Figure 2–66 shows how this entity relates to other entities.

**Figure 2–66 Customer Order Subclass Week Aggr Entity Relationships**

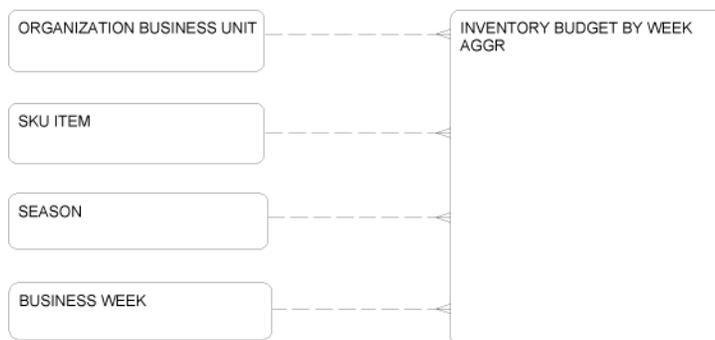


## Inventory Budget By Week Aggr

The Inventory Budget By Week Aggr entity is a weekly record of the budgeted quantity and cost of the inventory

Figure 2–67 shows how this entity relates to other entities.

**Figure 2–67 Inventory Budget By Week Aggr Entity Relationships**



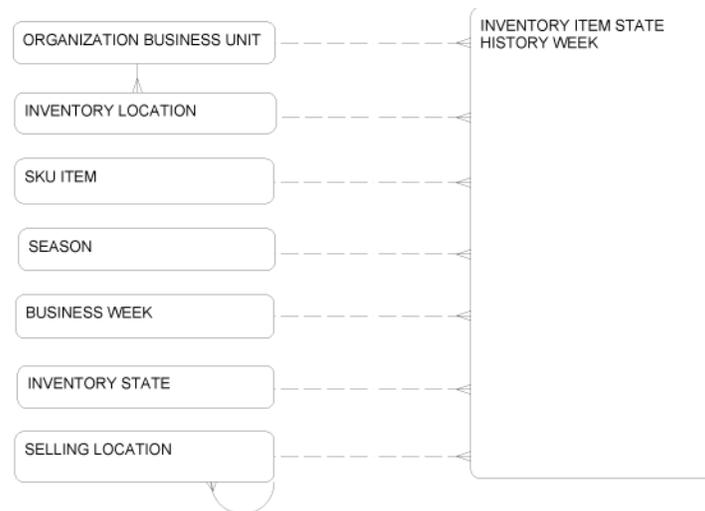
## Inventory Item State History Week

The Inventory Item State History Week entity is a weekly records of SKU item Location in inventory by business unit, selling location, and inventory location.

This entity is an aggregate of Inventory Item State.

Figure 2–68 shows how this entity relates to other entities.

**Figure 2–68 Inventory Item State History Week Entity Relationships**



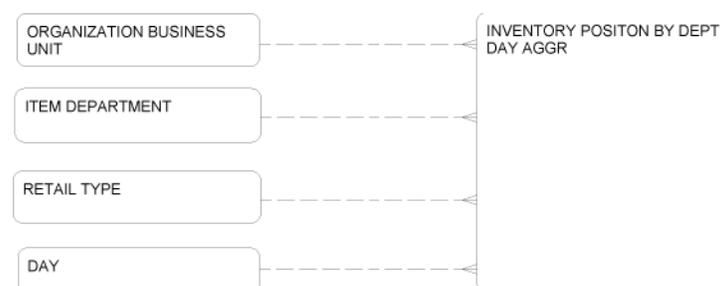
## Inventory Position By Department Day Aggr

The Inventory Position By Department Day Aggr entity is the daily status and value of Inventory; for example, stock on hand, on order for a business unit and SKU Item.

This entity is an aggregate of Inventory Position by Item Day Derived.

Figure 2–69 shows how this entity relates to other entities.

**Figure 2–69 Inventory Position By Department Day Aggr Entity Relationships**



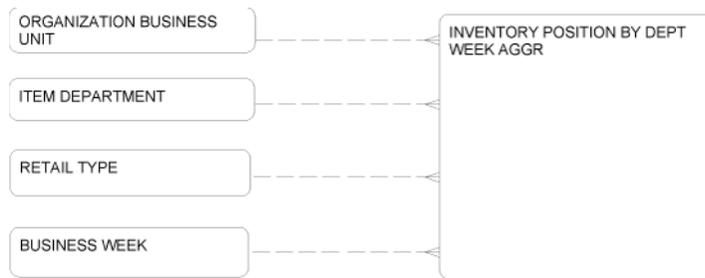
## Inventory Position By Department Week Aggr

The Inventory Position By Department Week Aggr is the weekly status and value of Inventory; for example, stock on hand, on order for a business unit and SKU Item.

This entity is an aggregate of Inventory Position by Item Day Derived.

Figure 2–70 shows how this entity relates to other entities.

**Figure 2–70 Inventory Position By Department Week Aggr Entity Relationships**



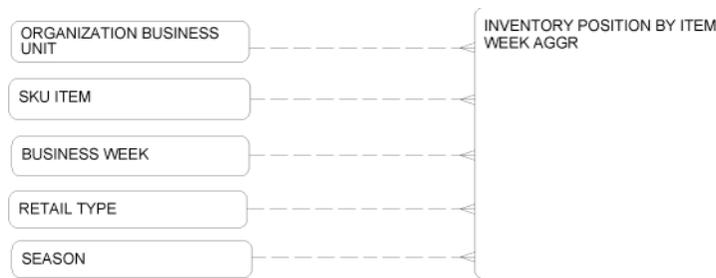
### Inventory Position By Item Week Aggr

The Inventory Position By Item Week Aggr entity is the weekly status of Inventory; for example, stock on hand, on order for a business unit and SKU Item.

This entity is an aggregate of Inventory Position by Item Day Derived.

Figure 2–71 shows how this entity relates to other entities.

**Figure 2–71 Inventory Position By Item Week Aggr Entity Relationships**



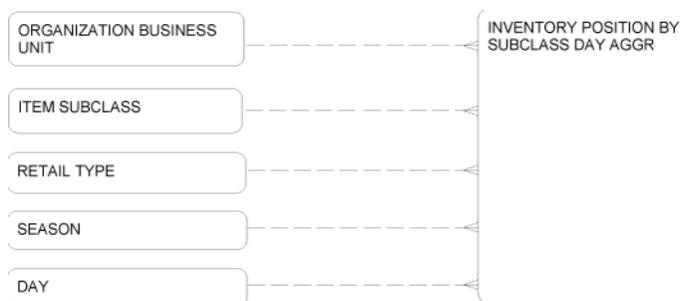
### Inventory Position Subclass Day Aggr

The Inventory Position Subclass Day Aggr entity is the daily status and value of Inventory; for example, stock on hand, on order for a business unit and item subclass.

This entity is an aggregate of Inventory Position by Item Day Derived.

Figure 2–72 shows how this entity relates to other entities.

**Figure 2–72 Inventory Position Subclass Day Aggr Entity Relationships**



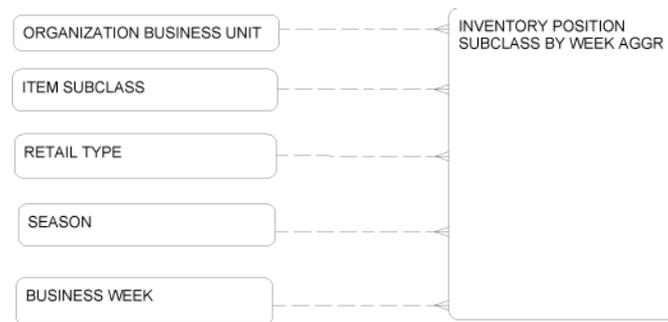
## Inventory Position Subclass Week Aggr

The Inventory Position Subclass Week Aggr entity is the weekly status and value of Inventory; for example, stock on hand, on order for a business unit and Item Subclass.

This entity is an aggregate of Inventory Position by Item Day Derived

Figure 2-73 shows how this entity relates to other entities.

**Figure 2-73 Inventory Position Subclass Week Aggr Entity Relationships**

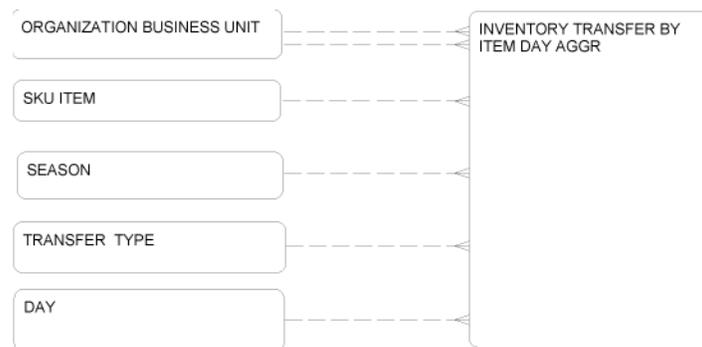


## Inventory Receipt By Item Day Aggr

The Inventory Receipt By Item Day Aggr entity is the daily record of inventory receipts by Item and business unit.

Figure 2-74 shows how this entity relates to other entities.

**Figure 2-74 Inventory Receipt By Item Day Aggr Entity Relationships**



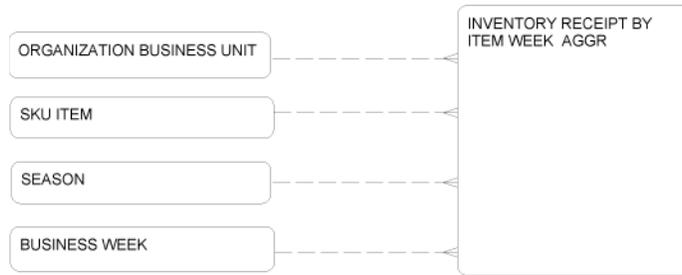
## Inventory Receipt By Item Week Aggr

The Inventory Receipt By Item Week Aggr entity is the weekly record of inventory receipts by Item and business unit.

This entity is an aggregate of Inventory Receipt by Item Day Aggr.

Figure 2-75 shows how this entity relates to other entities.

**Figure 2–75 Inventory Receipt By Item Week Aggr Entity Relationships**



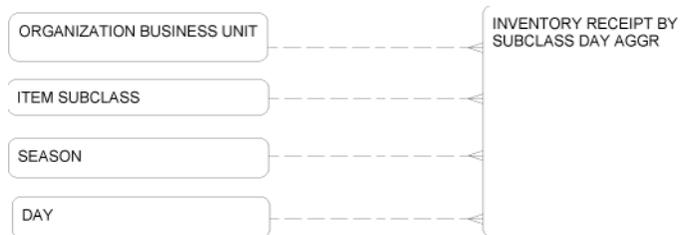
### Inventory Receipt By Subclass Day Aggr

The Inventory Receipt By Subclass Day Aggr entity is the daily record of inventory receipts by subclass and business unit.

This entity is an aggregate of Inventory Receipt by Item Day Aggr.

Figure 2–76 shows how this entity relates to other entities.

**Figure 2–76 Inventory Receipt By Subclass Day Aggr Entity Relationships**



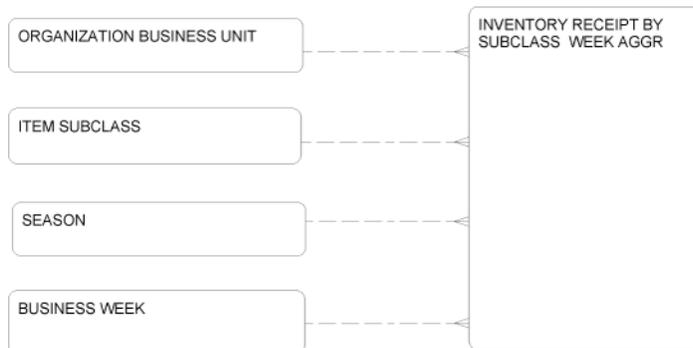
### Inventory Receipt By Subclass Week Aggr

The Inventory Receipt By Subclass Week Aggr is the weekly record of inventory receipts by subclass and business unit.

This entity is an aggregate of Inventory Receipt by Item Day Aggr.

Figure 2–77 shows how this entity relates to other entities.

**Figure 2–77 Inventory Receipt By Subclass Week Aggr Entity Relationships**

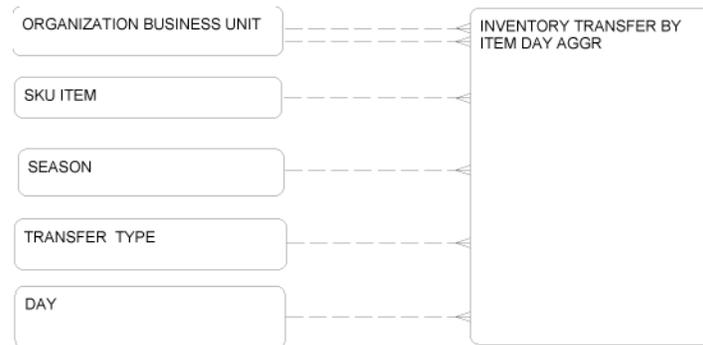


## Inventory Transfer By Item Day Aggr

The Inventory Transfer By Item Day Aggr entity is the daily record of inventory transfers at the Item, to business unit, from business unit, and transfer type.

Figure 2–78 shows how this entity relates to other entities.

**Figure 2–78 Inventory Transfer By Item Day Aggr Entity Relationships**



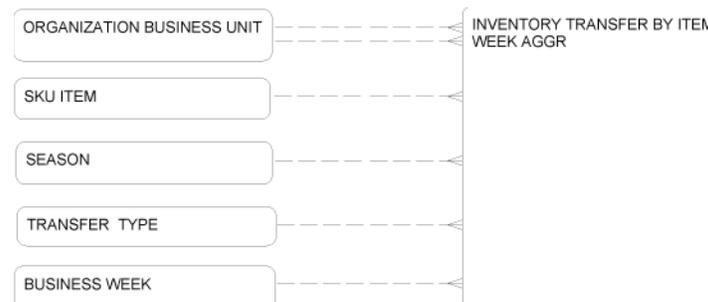
## Inventory Transfer By Item Week Aggr

The Inventory Transfer By Item Week Aggr entity is the weekly record of inventory transfers at the Item, to business unit, from business unit, and transfer type.

This entity is an aggregate of Inventory Transfer by Item Day Aggr.

Figure 2–79 shows how this entity relates to other entities.

**Figure 2–79 Inventory Transfer By Item Week Aggr**



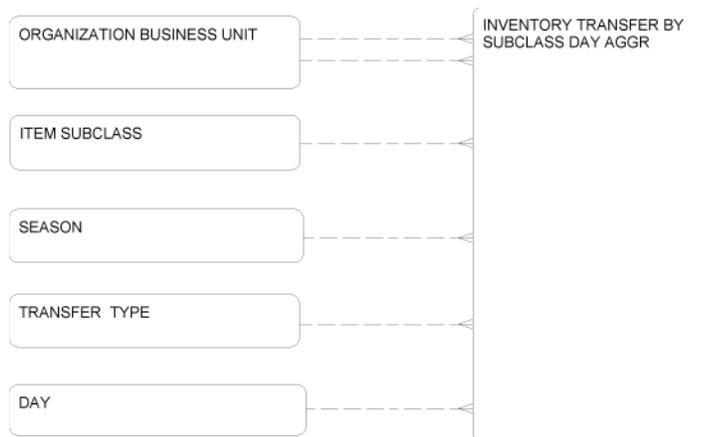
## Inventory Transfer By Subclass Day Aggr

The Inventory Transfer By Subclass Day Aggr entity is the daily record of Inventory transfer details by item subclass.

This entity is an aggregate of Inventory Transfer by Item Day Aggr.

Figure 2–80 shows how this entity relates to other entities.

**Figure 2–80 Inventory Transfer By Subclass Day Aggr**



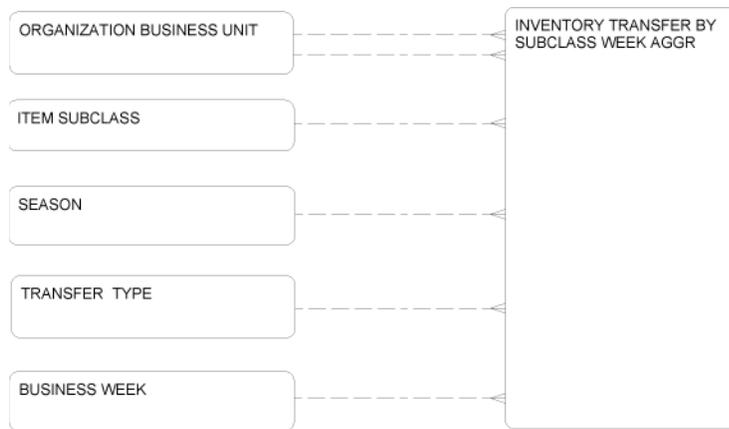
### Inventory Transfer By Subclass Week Aggr

The Inventory Transfer By Subclass Week Aggr is the weekly record of Inventory transfer details by item subclass.

This entity is an aggregate of Inventory Transfer by Item Day Aggr.

Figure 2–81 shows how this entity relates to other entities.

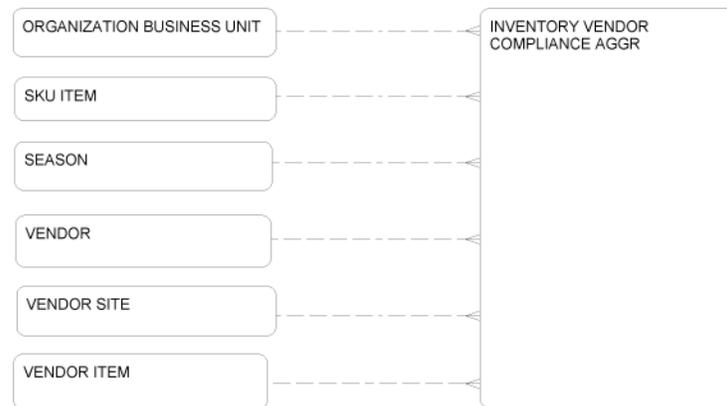
**Figure 2–81 Inventory Transfer By Subclass Week Aggr Entity Relationships**



### Inventory Vendor Compliance Aggr

The Inventory Vendor Compliance Aggr entity is the timeliness, quantity, quality control vendor compliance information at the SKU item-business unit-vendor-season level.

Figure 2–82 shows how this entity relates to other entities.

**Figure 2–82 Inventory Vendor Compliance Aggr Entity Relationships**

### Market Sales Department Week Aggr

The Market Sales Department Week Aggr entity is the details of weekly sales total of market items by department.

This entity is an aggregate of Market Sales Item Week.

[Figure 2–83](#) shows how this entity relates to other entities.

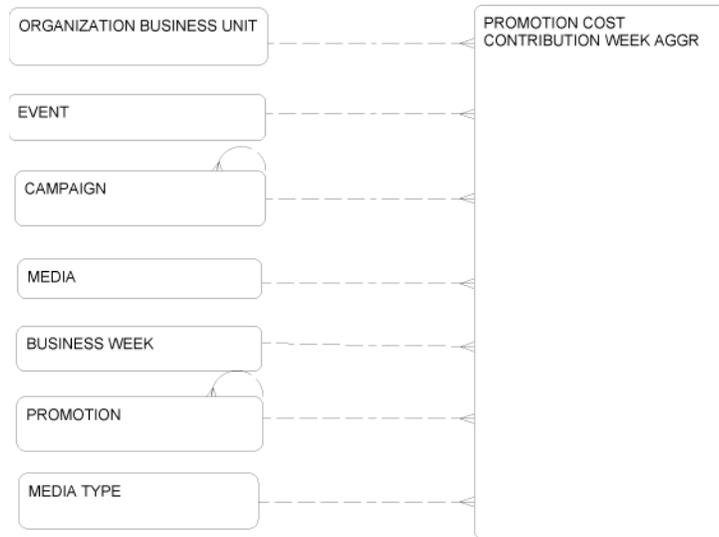
**Figure 2–83 Market Sales Department Week Aggr Entity Relationships**

### Promotion Cost Contribution Week Aggr

The Promotion Cost Contribution Week Aggr entity is the weekly record of cost contribution of items in a promotion.

[Figure 2–84](#) shows how this entity relates to other entities.

**Figure 2–84 Promotion Cost Contribution Week Aggr Entity Relationships**

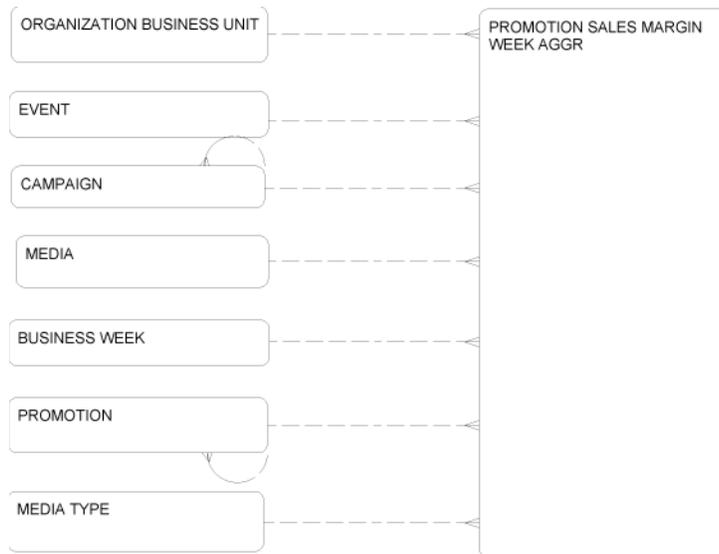


### Promotion Sales Margin Week Aggr

The Promotion Sales Margin Week Aggr entity is the weekly record of sales and margin of items in promotion.

Figure 2–85 shows how this entity relates to other entities.

**Figure 2–85 Promotion Sales Margin Week Aggr Entity Relationships**

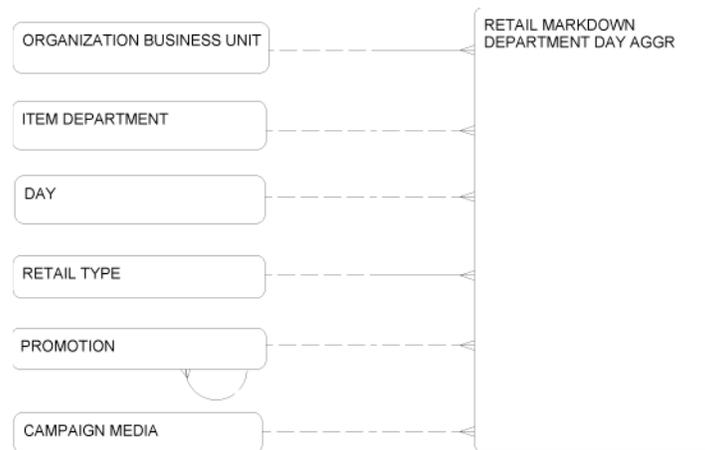


### Retail Markdown Department Day Aggr

The Retail Markdown Department Day Aggr entity is the daily summary markdown details by department.

This entity is an aggregate of Retail Sale Return Item Day Derived.

Figure 2–86 shows how this entity relates to other entities.

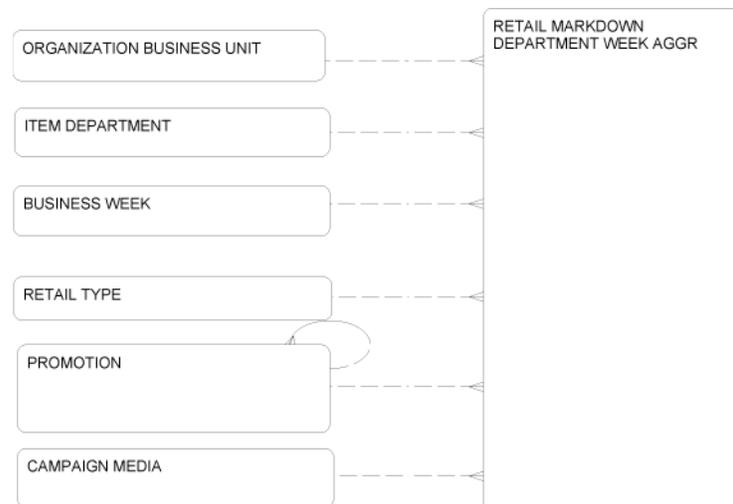
**Figure 2–86 Retail Markdown Department Day Aggr Entity Relationships**

### Retail Markdown Department Week Aggr

The Retail Markdown Department Week Aggr entity is the weekly summary markdown details by department.

This entity is an aggregate of Retail Sale Return Item Day Derived.

[Figure 2–87](#) shows how this entity relates to other entities.

**Figure 2–87 Retail Markdown Department Week Aggr Entity Relationships**

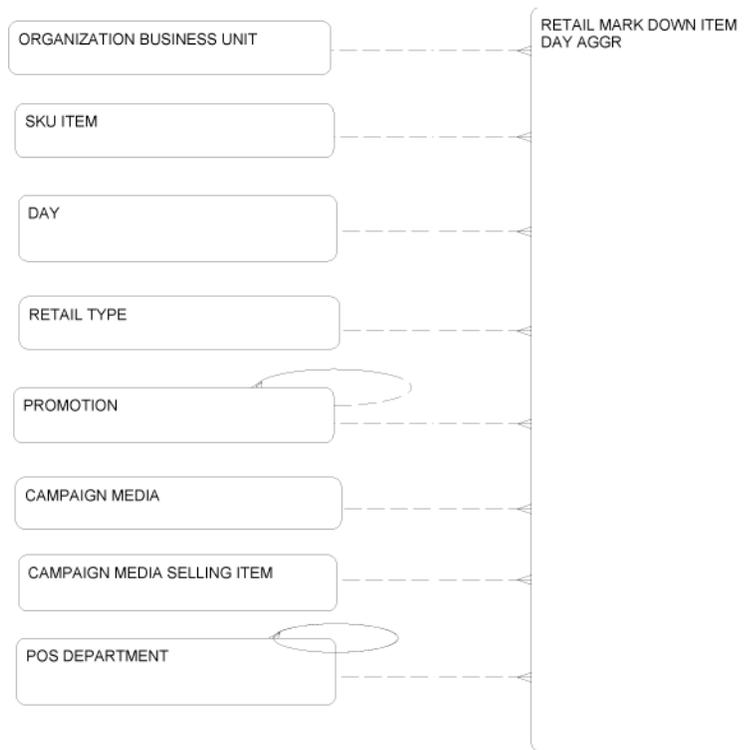
### Retail Markdown Item Day Aggr

The Retail Markdown Item Day Aggr entity is the daily summary of markdown details by Item.

This entity is an aggregate of Retail Sale Return Item Day Derived.

[Figure 2–88](#) shows how this entity relates to other entities.

**Figure 2–88 Retail Markdown Item Day Aggr Entity Relationships**



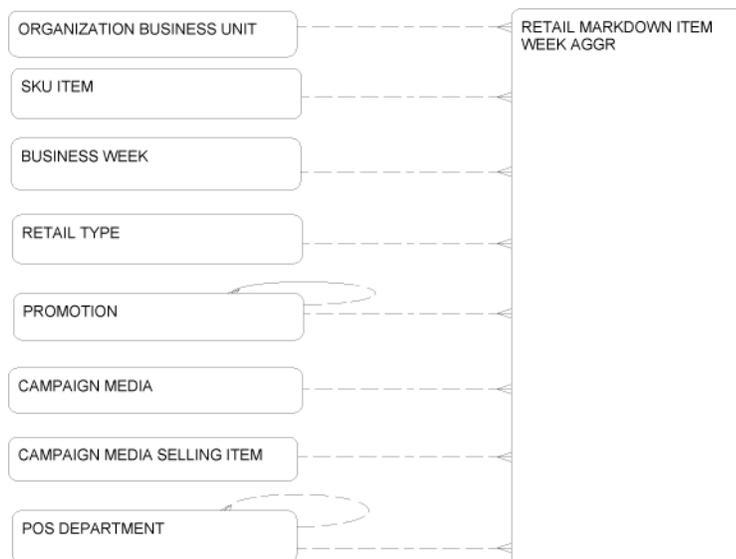
## Retail Markdown Item Week Aggr

The Retail Markdown Item Week Aggr entity is the weekly summary of markdown details by Item.

This entity is an aggregate of Retail Sale Return Item Day Derived.

Figure 2–89 shows how this entity relates to other entities.

**Figure 2–89 Retail Markdown Item Week Aggr Entity Relationships**



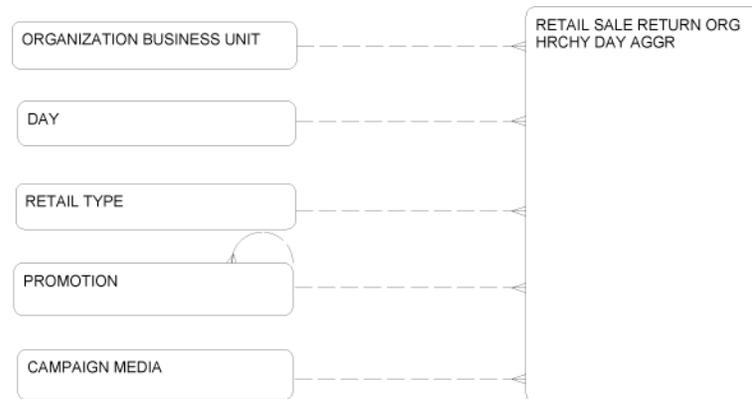
## Retail Sale Return Organization Hierarchy Day Aggr

The Retail Sale Return Organization Hierarchy Day Aggr entity is the daily summary of SKU Item sales and returns across organization hierarchy optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day Derived.

Figure 2–90 shows how this entity relates to other entities.

**Figure 2–90 Retail Sale Return Organization Hierarchy Day Aggr Entity Relationships**



## Retail Sale Return Department Day Aggr

The Retail Sale Return Department Day Aggr entity is the daily summary of sales and returns by department, optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day Derived.

Figure 2–91 shows how this entity relates to other entities.

**Figure 2–91 Retail Sale Return Department Day Aggr Entity Relationships**

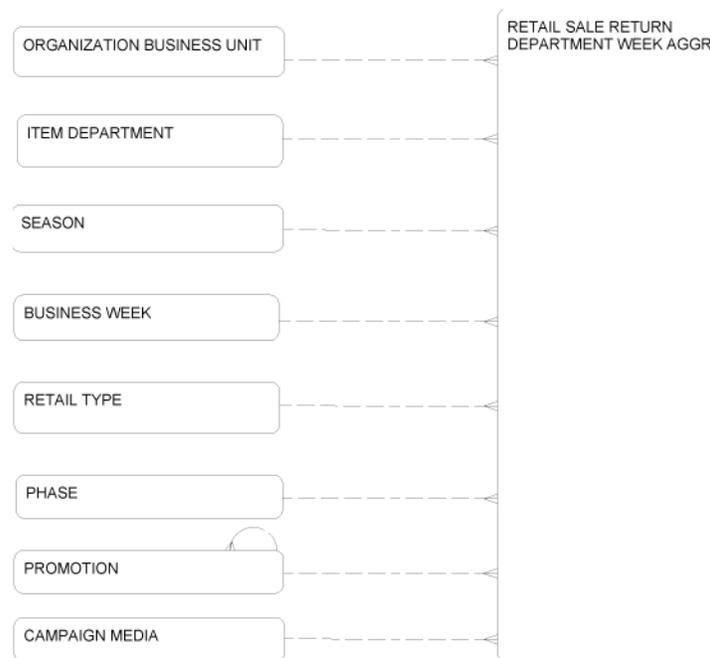


### **Retail Sale Return Department Week Aggr**

The Retail Sale Return Department Week Aggr entity is the weekly summary of sales and returns by department, optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day.

[Figure 2–92](#) shows how this entity relates to other entities.

**Figure 2–92 Retail Sale Return Department Week Aggr Entity Relationships**

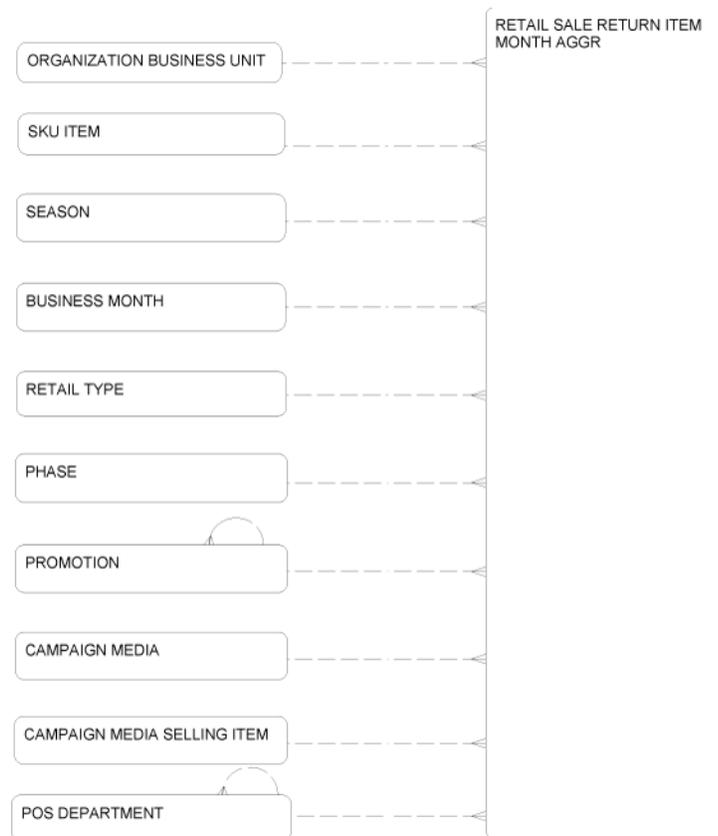
### Retail Sale Return Department Month Aggr

The Retail Sale Return Department Month Aggr entity is the monthly summary of SKU Item sales and returns for a business unit optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day.

[Figure 2–93](#) shows how this entity relates to other entities.

**Figure 2–93 Retail Sale Return Department Month Aggr Entity Relationships**

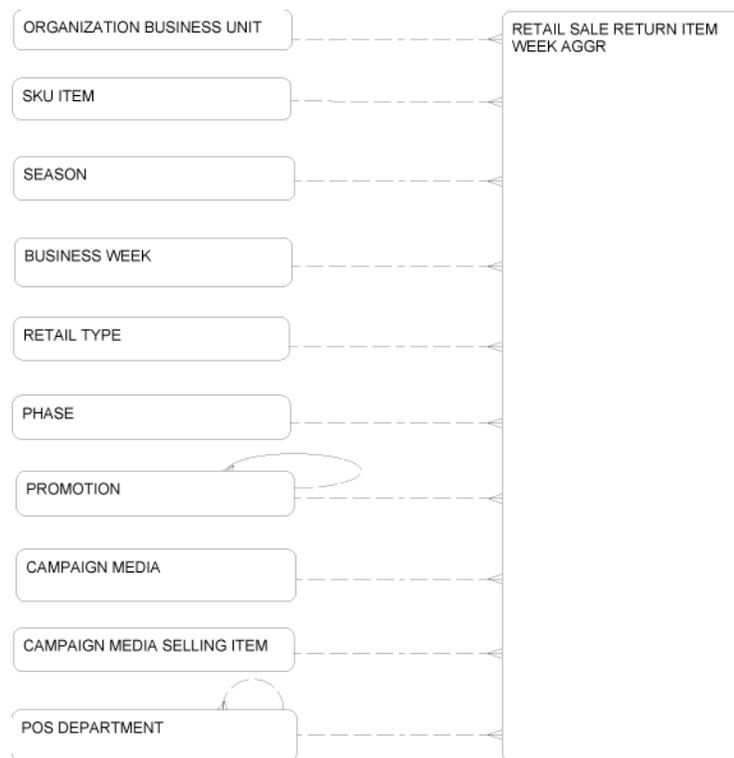


### Retail Sale Return Item Week Aggr

The Retail Sale Return Item Week Aggr is the weekly summary of SKU Item sales and returns for a business unit, optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day Derived.

Figure 2–94 shows how this entity relates to other entities.

**Figure 2–94 Retail Sale Return Item Week Aggr Entity Relationships**

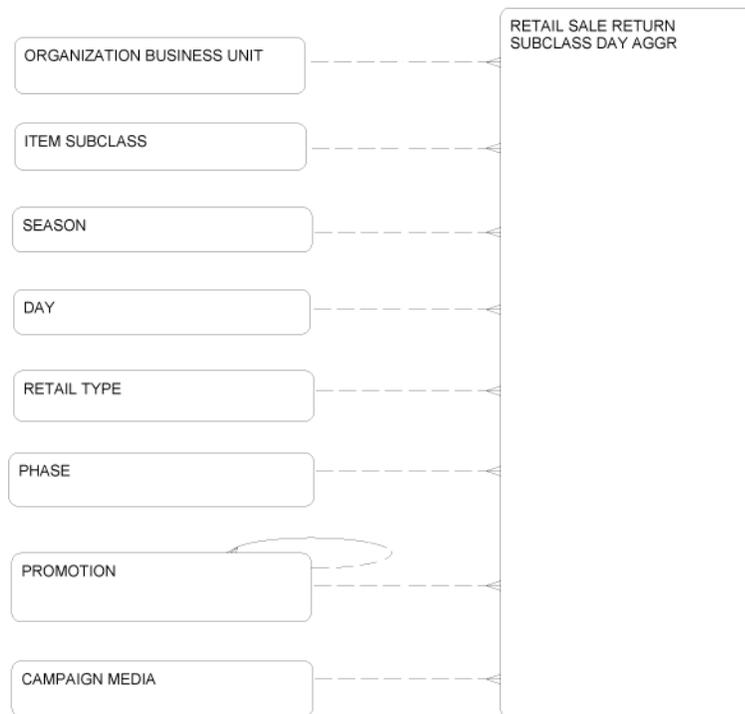
### Retail Sale Return Subclass Day Aggr

The Retail Sale Return Subclass Day Aggr entity is the daily summary sales and returns for a business unit by item subclass, optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day derived.

[Figure 2–95](#) shows how this entity relates to other entities.

**Figure 2–95 Retail Sale Return Subclass Day Aggr Entity Relationships**

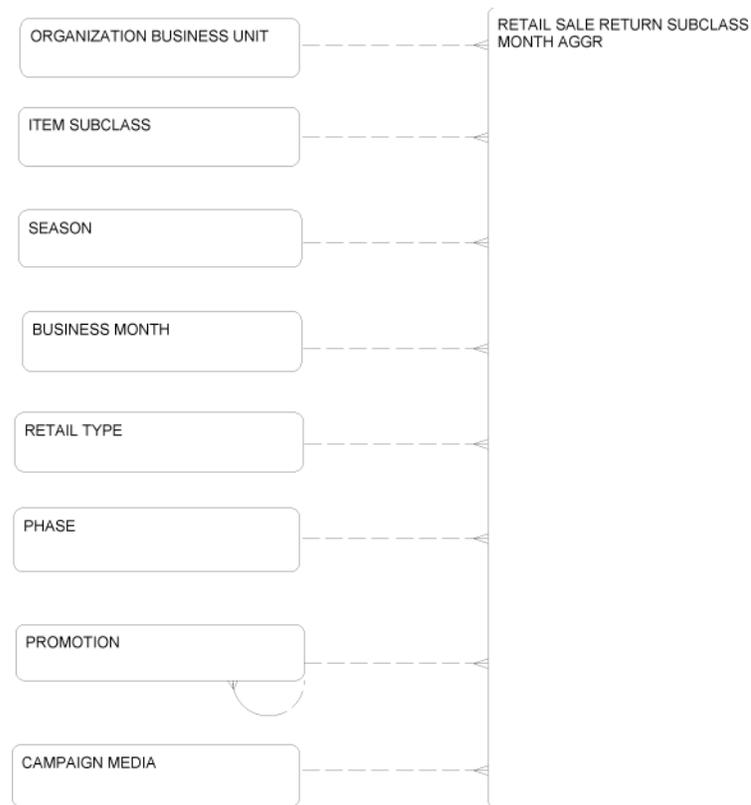


### Retail Sale Return Subclass Month Aggr

The Retail Sale Return Subclass Month Aggr entity is the monthly summary of sales and returns for a business unit by item subclass, optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day Derived.

[Figure 2–96](#) shows how this entity relates to other entities.

**Figure 2–96 Retail Sale Return Subclass Month Aggr Entity Relationships**

### Retail Sale Return Subclass Week Aggr

The Retail Sale Return Subclass Week Aggr entity is the weekly summary of Item subclass sales and returns for a business unit by item subclass, optionally by promotional campaign.

This entity is an aggregate of Retail Sale Return Item Day Derived.

[Figure 2–97](#) shows how this entity relates to other entities.

**Figure 2–97 Retail Sale Return Subclass Week Aggr Entity Relationships**

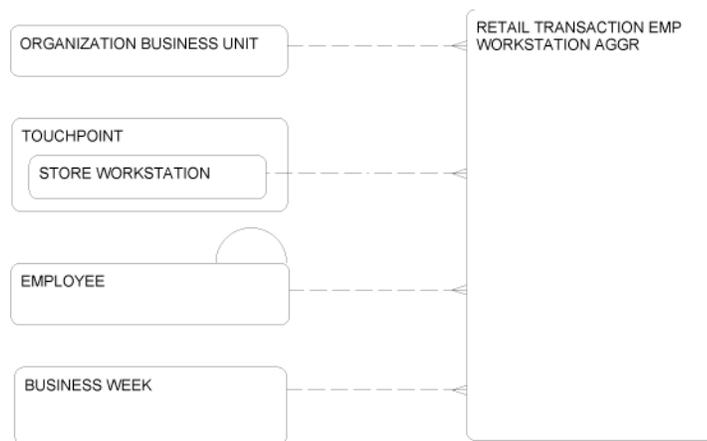


### Retail Transaction Emp Workstation Aggr

The Retail Transaction Emp Workstation Aggr entity is a summary of POS transaction details; for example, gross positive, tender loans, tender pickups, returns, by week for a given employee or workstation.

Figure 2–98 shows how this entity relates to other entities.

**Figure 2–98 Retail Transaction Emp Workstation Aggr**



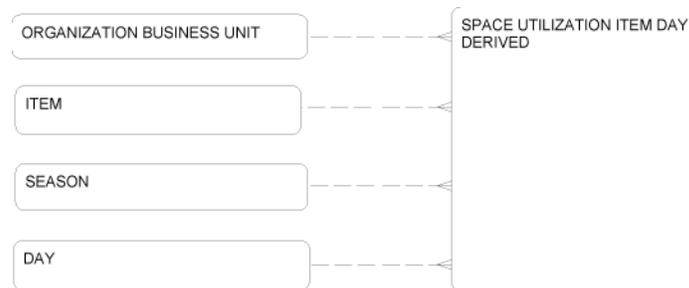
### Space Utilization Department Day Aggr

The Space Utilization Department Day Aggr entity is a daily Summary of allocated space by item.

This entity is an aggregate of Space Utilization Item Day Derived.

Figure 2–99 shows how this entity relates to other entities.

**Figure 2–99 Space Utilization Department Day Aggr Entity Relationships**

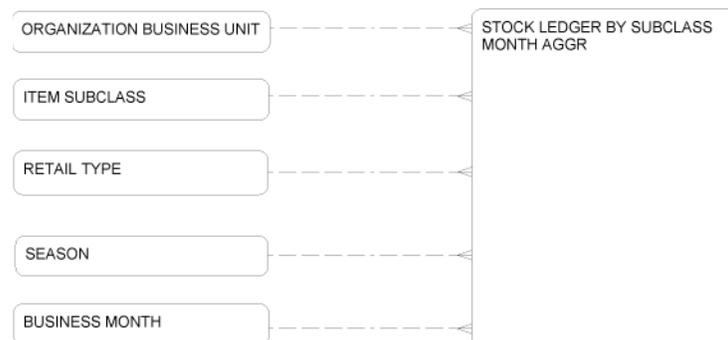


### Stock Ledger By Subclass Month Aggr

The Stock Ledger By Subclass Month Aggr entity is the monthly inventory values (for example, Begin and End Stock on Hand, Cost amounts, and Markdown Values at Subclass and business unit).

Figure 2–100 shows how this entity relates to other entities.

**Figure 2–100 Stock Ledger By Subclass Month Aggr Entity Relationships**

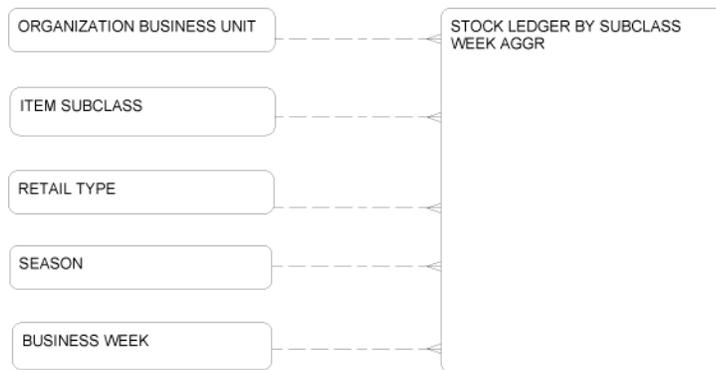


### Stock Ledger By Subclass Week Aggr

The Stock Ledger By Subclass Week Aggr entity is the weekly inventory values (for example, Begin and End Stock on Hand, Cost amounts, and Markdown Values at item Subclass and business unit).

Figure 2–101 shows how this entity relates to other entities.

**Figure 2–101 Stock Ledger By Subclass Week Aggr Entity Relationships**



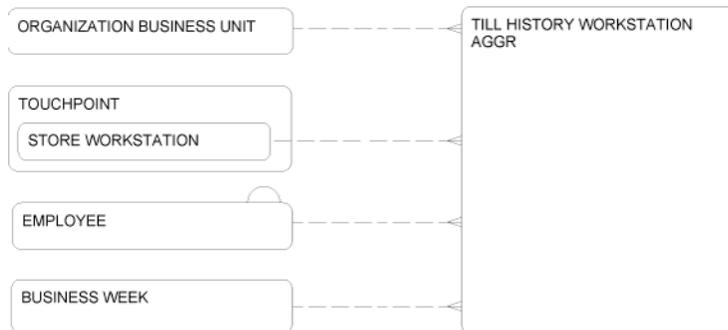
### Till History Workstation Aggr

The Till History Workstation Aggr entity is a collection of monetary and operational totals used to track the activity volume of a till between Till Settlement Transactions by workstation and week.

This entity is an aggregate of Till History.

[Figure 2–102](#) shows how this entity relates to other entities.

**Figure 2–102 Till History Workstation Aggr Entity Relationships**

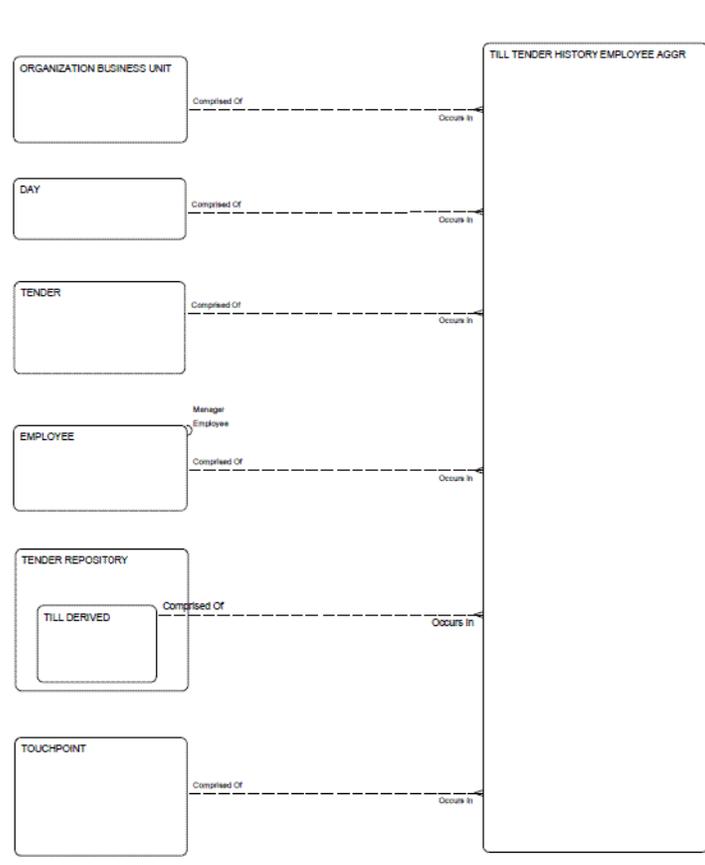


### Till Tender History Employee Aggr

The Till Tender History Employee Aggr entity is a

[Figure 2–103](#) shows how this entity relates to other entities.

**Figure 2–103 Till Tender History Employee Aggr Entity Relationships**

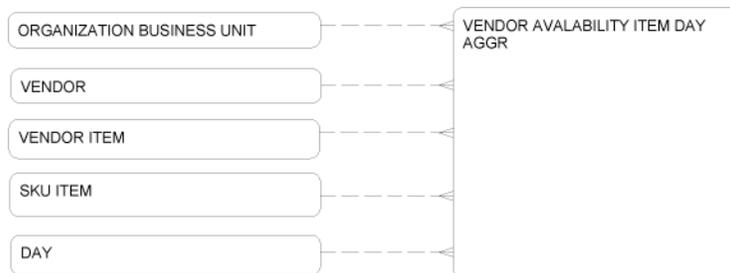


### Vendor Availability Item Day Aggr

The Vendor Availability Item Day Aggr entity is a daily Summary of quantities of SKU item available by vendor and item.

Figure 2–104 shows how this entity relates to other entities.

**Figure 2–104 Vendor Availability Item Day Aggr Entity Relationships**

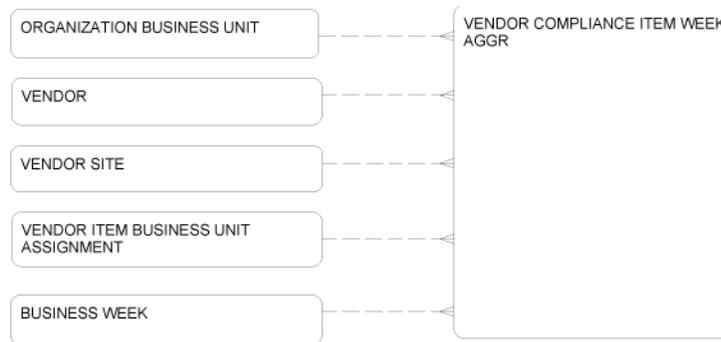


### Vendor Compliance Item Week

The Vendor Compliance Item Week entity is a weekly record of timeliness, quantity, quality control vendor compliance information by item, business unit, shipment, and Purchase Order.

Figure 2–105 shows how this entity relates to other entities.

**Figure 2–105 Vendor Compliance Item Week Entity Relationships**

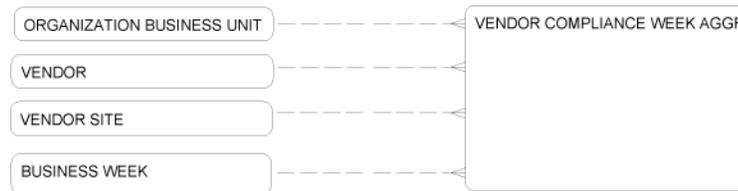


### Vendor Compliance Week Aggr

The Vendor Compliance Week Aggr entity is a weekly record of vendor compliance like, timeliness, quantity, quality control vendor compliance information by business unit shipment and Purchase Order.

Figure 2–106 shows how this entity relates to other entities.

**Figure 2–106 Vendor Compliance Week Aggr Entity Relationships**

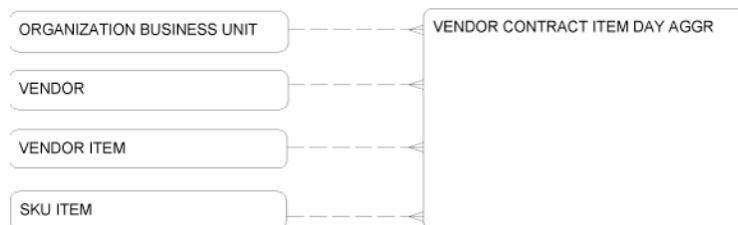


### Vendor Contract Item Day Aggr

The Vendor Contract Item Day Aggr entity is the daily cross-reference of vendor contract details by SKU Item.

Figure 2–107 Bshows how this entity relates to other entities.

**Figure 2–107 Vendor Contract Item Day Aggr Entity Relationships**



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# Physical Data Model of Oracle Retail Data Model

This chapter provides information about the physical model of Oracle Retail Data Model. It contains the following topics:

- [Reference Tables](#)
- [Lookup Tables](#)
- [Database Sequences](#)
- [Base Tables](#)
- [Derived Tables](#)
- [Aggregate Tables and Relational Materialized Views](#)
- [Physical Data Model of the Data Mining Component](#)
- [Physical Data Model of the OLAP Component](#)

## Introduction to the Oracle Retail Data Model Physical Model

The physical data model of the Oracle Retail Data Model is the physical manifestation of the logical data model into database tables and relationships (or foreign key constraints). Partitions, indexes, and relational materialized views have been added to aid performance.

The core physical data model for Oracle Retail Data Model is defined in the `bia_rtl` schema. It contains definitions for the following:

- [Reference Tables](#)
- [Lookup Tables](#)
- [Database Sequences](#)
- [Base Tables](#)
- [Derived Tables](#)
- [Aggregate Tables and Relational Materialized Views](#)

Additionally, Oracle Retail Data Model provides the following optional components:

- **Data Mining component.** The physical model of the data mining component is defined by the `bia_rtl_mining` schema and discussed in "[Physical Data Model of the Data Mining Component](#)" on page 3-42.
- **OLAP Component.** The physical model of the OLAP component is defined by the `bia_rtl_olap` schema and discussed in "[Physical Data Model of the OLAP Component](#)" on page 3-43.

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**Important:** Do not make changes to the schemas as such changes are not supported.

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When examining the predefined physical model, keep in mind the naming convention using DW (Data Warehouse) prefixes and suffixes to identify the types of tables and views:

| Suffix or prefix | Description                      |
|------------------|----------------------------------|
| DWR_             | Reference data table             |
| DWL_             | Lookup table                     |
| DWB_             | Base transaction table           |
| DWD_             | Derived (data mining) table      |
| DW_              | Aggregate (ROLAP or MOLAP) table |
| _MV              | Relational materialized view     |

## Reference Tables

The Reference tables are briefly described in [Table 3–1](#).

**Table 3–1 Reference Tables, Descriptions, and Notes**

| Table Name        | Description              | Notes  |
|-------------------|--------------------------|--|
| DWR_ADDR_LOC      | Address Location         | Address for an individual location. Reference Entity, from the Location Geography ERD.   |
| DWR_ADDR_LOC_HIST | Address location history | Captures history of the names and addresses associated with a party or customers.  |
| DWR_ADDR_PHONE    | Address Telephone        | Address Telephone contains all the phone numbers for a specific address.   |
| DWR_ADDR_RLTD     | Address related          | This entity associates addresses with other addresses. Address can be associated in many ways. For example, one address is an alternate for another address for those locations with multiple addresses. |
| DWR_ADVR_PERIOD   | Advertising Period       | Captures information relating to a Period in an Advertising Calendar.  |
| DWR_ADVR_QTR      | Advertising Quarter      | Captures information relating to a Quarter in an Advertising Calendar.   |
| DWR_ADVR_WK       | Advertising week         | Captures information relating to a Week in an Advertising Calendar.  |
| DWR_ADVR_YR       | Advertising year         | Captures information relating to a Year in an Advertising Calendar.  |
| DWR_ALTVE_ITEM    | Alternative item         | A cross reference of items that may be substituted or offered in place of another item.  |
| DWR_APPT_CALNDR   | Appointment Calendar     | Captures the exact time of appointment.  |
| DWR_BASE_DAY      | Vertical Day table       | Base Table of the Time hierarchy in all Calendars.   |
| DWR_BRND          | Brand                    | The selling and promotional name used to identify a product for advertising and name recognition purposes.   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>             | <b>Description</b>                      | <b>Notes</b>   |
|-------------------------------|---|--|
| DWR_BSNS_ENT_SLNG_RULE        | Business Entity Selling Rule            | Identifies the organization's Business Entity Rule.  |
| DWR_BSNS_ENT_TNDR_RSTRCT_RULE | Business Entity Tender Restriction Rule | Identifies the organization's Business Entity Tender Restriction Rule.   |
| DWR_BSNS_HLF_MO               | Business Half Month                     | Captures information relating to a Fortnight in a Business Calender.   |
| DWR_BSNS_HLF_YR               | Business Half Year                      | Captures information relating to half year in a Business Calender.   |
| DWR_BSNS_MO                   | Business Month                          | Captures information relating to a month in a Business Calender.   |
| DWR_BSNS_QTR                  | Business Quarter                        | Captures information relating to a quarter in a Business Calender.   |
| DWR_BSNS_UNIT_CLNDR           | Business Unit Calendar                  | Operating Calendar for the Business Unit, allocated for each day of the year.  |
| DWR_BSNS_UNIT_JB_RL           | Business Unit Job Role                  | Captures The specific job role for a organization.   |
| DWR_BSNS_UNIT_SHFT            | Business Unit Shift                     | Work shift associated with the Business Unit, mapped to the Employee job roles for the allocation for these shifts.  |
| DWR_BSNS_WK                   | Business Week                           | Captures information relating to a week in a Business Calender.  |
| DWR_BSNS_YR                   | Business Year                           | Captures information relating to a year in a Business Calender.  |
| DWR_CARRIER                   | Carrier                                 | Captures the information about the carrier, logistic company or the transporter of goods.                            |
| DWR_CERTIFICATE               | Certificate                             | Holds the information of a certificate given by retail store for different purpose. For example, a Gift Certificate. |
| DWR_CLNDR_HLF_MO              | Calender Half Month                     | Captures information relating to a Fortnight in a Normal Calendar.   |
| DWR_CLNDR_HLF_YR              | Calender Half Year                      | Captures information relating to half year in a Normal Calendar.   |
| DWR_CLNDR_MO                  | Calender Month                          | Captures information relating to a month in a Normal Calendar.   |
| DWR_CLNDR_QTR                 | Calender Quarter                        | Captures information relating to a quarter in a Normal Calendar.   |
| DWR_CLNDR_WK                  | Calender Week                           | Captures information relating to a week in a Normal Calendar.  |
| DWR_CLNDR_YR                  | Calender Year                           | Captures information relating to a year in a Normal Calendar.  |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>         | <b>Description</b>                | <b>Notes</b>   |
|---------------------------|-----------------------------------|--|
| DWR_CMPGN                 | Campaign                          | Campaigns are the entire communication strategy for a specific marketing communications program. The marketing communications program is frequently in support of promotional events and individual promotions but can be standalone. Retailers execute several different types of campaigns, including advertising, direct marketing and in-store marketing. There are several sub-types within each category as well. Advertising includes (1) traditional broadcast, (2) direct response and (3) online. Direct marketing includes (1) individually tracked and (2) summary tracking. In-store includes (1) broadcast and (2) 1:1. The 1:1 is usually performed in call centers or on Web sites. Each campaign consists of 1 to n communications, which is the lowest level of the campaign object. |
| DWR_CMPGN_CUST_ASGNMNT    | Cost Campaign Customer Assignment | Deals with cost of media and is an assignment entity among Campaign Execution Message, Customer, and Campaign Message Rendering.   |
| DWR_CMPGN_EXECUTION_MSG   | Campaign Execution Message        | Holds details about the execution message used in a campaign.  |
| DWR_CMPGN_MEDIA           | Campaign Media                    | Holds details about the media through which the Campaign is launched.  |
| DWR_CMPGN_MEDIA_LAUNCH    | Campaign Media Launch             | Holds details about how a media is launched, for a campaign.   |
| DWR_CMPGN_MEDIA_SLNG_ITEM | Campaign Media Selling Item       | The items for which the Campaign is launched through a media.  |
| DWR_CMPGN_MSG_DPCT        | Campaign Message Depiction        | Holds details about how the execution message is depicted, for a campaign.   |
| DWR_CMPGN_MSG_RNDRNG      | Campaign Message Rendering        | Holds details about how the execution message is to be rendered, for a campaign. Cost - The total spent for goods or services including money and time and labor. Value measured by what must be given or done or undergone to obtain something. Target - Medium on which the campaign message is rendered.  |
| DWR_CMPNY                 | Company                           | Top level of the product and organization hierarchy. The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See " <a href="#">Relational Views Used When Loading the Analytic Workspace</a> " on page 3-57 .  |
| DWR_CMPTR                 | Competitor                        | A retailer with a product range and customer base similar to those for the store.  |
| DWR_CMPTR_LOC             | Competitor Location               | This entity holds non-historical information about competitors and their individual locations  |
| DWR_CMPTR_LOC_ASGNMNT     | Competitor Location Assignment    | This entity holds the relationship between competitor locations and business unit locations. For example, a competitor grocery store may contain a bank, a florist, and a pharmacy. Competitors can be either primary or secondary.  |

**Table 3-1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name                    | Description   | Notes   |
|-------------------------------|---|---|
| DWR_CMPTR_RTL_ITEM            | Competitor retail item  | RETAIL ITEM which is stocked by a COMPETITOR and is perceived by the customer to have no discernible difference in terms of form, fit or function -- but may be sold at a different retail price.   |
| DWR_CREA                      | Creatives   | Information about the creative content of the message   |
| DWR_CUST                      | Customer Quick Facts Profile<br>individual Profile<br>organization Customer | Collection of Customer related measures. Profile attributes of an individual. Sub type of Profile. Profile attributes for an organization. Captures the information about the customers.  |
| DWR_CUST_ACCT                 | Customer Account  | A charge account or other accounting relationship a customer has with the store or enterprise. An account exists to allow the store to record a series of transactions with the same customer and keep an ongoing record of monies owed by the customer and monies due to the customer.                     |
| DWR_CUST_ADDR                 | Customer address  | Assigns the address location to a Profile, customer or a party  |
| DWR_CUST_AFFLTN               | Customer Affiliation  | Associates a customer with a customer group   |
| DWR_CUST_CLSTR                | Customer Cluster  | This entity holds all customer clusters and their descriptions. The data must come from an external source.   |
| DWR_CUST_CLSTR_ITEM_ASSIGNMNT | Customer Cluster Item Assignment  | Maps Customer Cluster with Item   |
| DWR_CUST_GRP                  | Customer Group  | A group of customers based on specific demographic and marketing attributes and properties. Examples include over 65 year old customers, students, unions, and other associations.  |
| DWR_CUST_GRP_ITEM             | Customer Group Item   | An association of Item and Customer Group, the data for this should come from external source.  |
| DWR_CUST_OCCSN                | Customer Occasion   | Stores an event celebrated or observed by a customer.   |
| DWR_CUST_PREF                 | Customer preference   | A description of the merchandise preferences of a Key Customer, for classes of items or other general categories.   |
| DWR_CUST_RLTNSHP              | Customer Relationship   | This identifies the relationship between two customers. Example associating the Husband - Wife relationship.  |
| DWR_CUST_RSTRCTD_INFO         | Customer Restricted Information   | Captures the restricted information for the customer or prospects   |
| DWR_CUST_STATUS               | Customer Status   | Captures the current status of a prospect, customer or a profile.   |
| DWR_DAY                       | Horizontal Day Table  | Day level in the normal calendar. Reference Entity.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 . |
| DWR_DAY_TODATE_TRANS          | Day To Date Transformation  | Cumulative time transformations at the day level. For example: this day last year, this day last month and other day level measures.  |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>        | <b>Description</b>              | <b>Notes</b>   |
|--------------------------|---------------------------------|--|
| DWR_DAY_TRANS            | Day transformations             | Transformation for a day. For example: this day last year, this day last month, this day with any last time frame.   |
| DWR_DEMOG_ATTR           | Demographic attribute           | A sub-level group or category further qualifying a set of data (Profile Group) collected about a customer to assist in marketing efforts. Examples include NC - Number of Children, EDL - Education Level,.  |
| DWR_DEMOG_GRP            | Demographic Group               | The domain of classifications used to group profile information about a Party. Examples: CH - Credit History, ED- Education, EM - Employment, EQ- Equipment, HB - Hobbies, HH - Household, OR - Organization, and other relevant demographics and psychographics.  |
| DWR_DPST_RULE            | Deposit Rules                   | Entity that defines the rules governing the deposit payment that must be paid by the customer at the time the item is purchased and the refund that must be made to the customer upon return of the item package or container. This rule is most often related to bottles, aluminum cans, crates and other containers which must be returned for reuse or recycling. |
| DWR_DRVD_VAL             | Derived Value                   | This entity stores the derived value of the customer. These value could have multiple value types or value measures.   |
| DWR_DSCRPNCY_TOLRNC_RULE | Discrepancy Tolerance Rule      | A rule that defines permissible variance between the total inventory control document cost (based on the suppliers cost) and the stores receiving total (based on the stores record of supplier item cost). Any variance that exceeds the discrepancy threshold triggers an invoice or item-level reconciliation.  |
| DWR_EMAIL_ADDR           | E-mail Address                  | Captures address containing Electronic Addresses that can be accessed with a computer such as an Internet address.   |
| DWR_EMP                  | Employee                        | An individual that works for a retail store, accepts direction from the retail store management and satisfies the statutory criteria requiring that payroll taxes and benefit contributions be paid by the retailer.   |
| DWR_EMP_ACT_LBR_HRLY     | Employee Actual Labour hourly   | This table records the actual shifts the hourly employees have worked in.  |
| DWR_EMP_ACT_LBR_SAL      | Employee Actual Labour Salaried | This table records the actual shifts worked by the salaried employees.   |
| DWR_EMP_ADDR             | Employee Address                | This table serves as a mapping table between the employee table and the address location table. It records the various addresses of an employee and the type of address it is.   |
| DWR_EMP_DESIG            | Employee Designation            | The table stores the various designations present in an organization for the employees   |
| DWR_EMP_DISC_GRP         | Employee Discount Group         | A group of EMPLOYEES who share the same employee discount privilege.   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>        | <b>Description</b>                            | <b>Notes</b>   |
|--------------------------|---|--|
| DWR_EMP_DISC_GRP_ASGNMNT | Employee Discount Group Assignment            | An association between an employee and an employee discount group which makes the employee eligible for the price reductions available to the discount group.  |
| DWR_EMP_JOB_ROLE_ASGNMNT | Employee Job Role Assignment                  | This entity indicates the matching of the various job roles present in the organization with the employees   |
| DWR_EMP_RSTRCTD_INFO     | Employee Restricted Information               | This entity stores confidential information regarding the employees, like the date of birth or national identifier of an employee.   |
| DWR_EMP_SCHL             | Employee Schedule                             | This entity stores the planned schedule for an employee, which consists of the store, job role and shift the employee is planned to work.  |
| DWR_EMP_TRNG_REC         | Employee Training Record                      | A record that a particular employee has been trained in performing a particular Task.  |
| DWR_EVNT                 | Event   | Events provide retailers with an umbrella to consolidate and coordinate related marketing and promotion tactics into a cohesive strategy. Events vary by retail segment, with store sales popular in apparel while weekly discounts (or TPR's) are more common in grocery. The event ensures that the costs and results of disparate marketing and promotional activity can be analyzed and compared against other event strategies as a single entity. Events are comprised of promotions and are communicated through campaigns. |
| DWR_EXTRNL_DPSTRY        | Tender Repository Derived External Depository | Holds tender details in different repositories like Safe, Till, or External Depository. Depository external to the store to which funds can be transferred or received from, such as a bank  |
| DWR_FCTR_CMPNY           | Factor company                                | Stores the information about the factor company. Factor is the financial instrument to raise the money by factoring the bills.   |
| DWR_FSCL_HLF_MO          | Fiscal Half Month                             | Half-month level in the fiscal calendar.   |
| DWR_FSCL_HLF_YR          | Fiscal Half Year                              | Half-year level in the fiscal calendar.  |
| DWR_FSCL_MO              | Fiscal Month                                  | Month level in the fiscal calendar.  |
| DWR_FSCL_QTR             | Fiscal Quarter                                | Quarter level in the fiscal calendar.  |
| DWR_FSCL_WK              | Fiscal Week                                   | Week level in the fiscal calendar.   |
| DWR_FSCL_YR              | Fiscal Year                                   | Year level in the fiscal calendar.   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>   | <b>Description</b>              | <b>Notes</b>  |
|---------------------|---------------------------------|---|
| DWR_GEOG_DEMOG_ATTR | Geography Demography Attributes | <p>A classification for a Geography Profile Group. Example for the profile group RACE:</p> <ul style="list-style-type: none"> <li>▪ Percent White</li> <li>▪ Percent Black</li> <li>▪ Percent Native American</li> <li>▪ Percent Pacific Islander or Asian</li> <li>▪ Percent Persons Of Hispanic Origin</li> <li>▪ Percent Asian Indian</li> <li>▪ Percent Japanese</li> <li>▪ Percent Chinese</li> <li>▪ Percent Filipino</li> <li>▪ Percent Korean</li> <li>▪ Percent Vietnamese</li> <li>▪ Percent Hawaiian</li> </ul>  |
| DWR_GEOG_DEMOG_GRP  | Geography Demographic Group     | <p>A classification for a Geographic and Demographic Profile attribute. Groups include:</p> <ul style="list-style-type: none"> <li>▪ Population Characteristics</li> <li>▪ Urban or Rural</li> <li>▪ Gender</li> <li>▪ Race</li> <li>▪ Ethnic Background</li> <li>▪ Age</li> <li>▪ Age: Children 0-17</li> <li>▪ Age: Adults 18-75+</li> <li>▪ Household Characteristics</li> <li>▪ Population Age 65+</li> <li>▪ Household Size Characteristics</li> <li>▪ Marital Status</li> <li>▪ Household Size</li> <li>▪ Housing Units</li> <li>▪ Housing</li> <li>▪ Group Quarters</li> <li>▪ Home Value Amounts</li> <li>▪ Rent</li> </ul> |
| DWR_GEOG_DEMOG_VAL  | Geography demographic value     | Stores the value of the Geography demography Profile. For example, the value for Population (say, 102977) is stored here.   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name                 | Description                                 | Notes  |
|----------------------------|---|--|
| DWR_GEOG_ENT               | Geography Entities                          | Describes the various physical geography entities that can be created. For example Geographic Entities could be: <ul style="list-style-type: none"> <li>■ Sales Region North</li> <li>■ State</li> <li>■ country</li> <li>■ city</li> <li>■ geography</li> <li>■ EMEA</li> <li>■ Americas</li> </ul> |
| DWR_GEOG_HRCHY             | Geography hierarchy                         | Stores the details of a Geographical hierarchy; for example, Geography sales hierarchy Geography customer hierarchy, or Geography purchase hierarchy.  |
| DWR_GEOG_HRCHY_LVL         | Geographical hierarchy level                | Associative entity for Geography Hierarchy and Geography Levels, mapping levels to hierarchies.  |
| DWR_GEOG_HRCHY_LVL_ASGNMNT | Geography entity hierarchy level assignment | Associative entity for Geography Hierarchy Level and Geography Entities; assigns geography values to hierarchy levels.   |
| DWR_GEOG_HRCHY_VRSN        | Geography hierarchy version                 | The version table for the hierarchies.   |
| DWR_GEOG_LVL               | Geography levels                            | This Entity stores all the Geographical levels as required by the analytics. Level definitions could be as simple as Level 1 or level 2, or could be Geography 1 or Geography 2.   |
| DWR_GEOG_LVL_ATTR          | Geography level attributes                  | Stores the attributes at a specific geographical level such as Population.   |
| DWR_GEOG_LVL_ATTR_VAL      | Geography level attributes value            | This entity stores the various geography level attributes. So for example in a Sales hierarchy you have North sales region and you want to store the population of that region. It can stored here in this entity.   |
| DWR_HH                     | HouseHold                                   | Captures household information about an individual.  |
| DWR_HLF_HR                 | Half Hour                                   | This table contains information at the half hour level.  |
| DWR_HLF_MO_TODATE_TRANS    | Half Month To Date Transformation           | Holds cumulative time transformations at the half month level.   |
| DWR_HLF_MO_TRANS           | Half Month Transformation                   | Transformations for a half month. Example: this half month last year, this year last half month and others.  |
| DWR_HLF_YR_TODATE_TRANS    | Half Year To Date Transformation            | Cumulative time transformations at the half year level.  |
| DWR_HLF_YR_TRANS           | Half Year Transformation                    | Transformations for a half year. For example, this half year last year, this year last half year and others.   |
| DWR_HR                     | Hour  | This table contains information at the hour level.   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name                  | Description                      | Notes  |
|-----------------------------|----------------------------------|--|
| DWR_INDVL_DEMOG_VAL         | Individual demography value      | This entity stores the detailed information and its value collected about customers. For example age has Demography group as AGE, Attribute as various bands and value as 15 years which are stored in this entity.  |
| DWR_INV_LOC                 | Inventory Location               | A physical place the retailer stores merchandise. It may be co-located at a Site with Retail Store, Distribution Center, or Administrative Center. It does not include containers, ships and trucks that are in transit.   |
| DWR_ITEM                    | Item table                       | Item table is the lowest level for the Item dimension and has actual item values such as handset models, starter kit packages and recharge vouchers. The sales fact stores the data at item level for item dimension<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 . |
| DWR_ITEM_CLASS              | Item Class                       | Class within a department in the product hierarchy, as it was at a given point in time.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .  |
| DWR_ITEM_CLSTR              | Item Cluster                     | This entity holds all item clusters and their descriptions.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .  |
| DWR_ITEM_CLSTR_CUST_ASGNMNT | Item Cluster Customer Assignment | Maps Item Cluster with Customer  |
| DWR_ITEM_CTGRY              | Item Category table              | Category within a subClass in the product hierarchy, as it was at a given point in time.   |
| DWR_ITEM_DEPT               | Item Department                  | Departments within a group in the product hierarchy, as it was at a given point in time.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .   |
| DWR_ITEM_DIV                | Item Division                    | Divisions within a company in the product hierarchy, as it was at a given point in time.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name                 | Description                     | Notes  |
|----------------------------|---------------------------------|--|
| DWR_ITEM_GRP               | Item Group                      | Group within a division in the product hierarchy, as it was at a given point in time.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .                |
| DWR_ITEM_HRCHY             | Item hierarchy                  | Hierarchy names and descriptions for item dimension  |
| DWR_ITEM_HRCHY_LVL         | Item hierarchy level            | Hierarchy level name and description   |
| DWR_ITEM_HRCHY_LVL_ASGNMNT | Item hierarchy level assignment | Item Level assignments within an Item Hierarchy  |
| DWR_ITEM_HRCHY_VRSN        | Item Hierarchy Version          | The version table for the hierarchies.   |
| DWR_ITEM_LVL               | Item level                      | Name and Description for Item Levels   |
| DWR_ITEM_LVL_ATTR          | Item level attribute            | Names of Attributes associated with an item hierarchy level  |
| DWR_ITEM_LVL_ATTR_VAL      | Item level attribute value      | Values for Attributes associated with an item hierarchy level.   |
| DWR_ITEM_MKT_DATA          | Item Market Data                | This entity holds Market Items. Market items refers to the flow of goods through distribution channels authorized by the manufacturer or producer.   |
| DWR_ITEM_SBC               | Item Subclass                   | Subclass within a class in the product hierarchy, as it was at a given point in time.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .                |
| DWR_ITEM_SBDEPT            | Item Sub department table       | Item SubDepartment within a Department in the product hierarchy, as it was at a given point in time.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 . |
| DWR_ITEM_SEASON            | Item Season                     | Associative entity for Item, Season, and Phase; maps items to seasons and phases.  |
| DWR_ITEM_SHELF_LABEL       | Item shelf label                | A type of ITEM LABEL that provides a means of conveying information about a RETAIL ITEM to the CUSTOMER, the EMPLOYEE, or both. The label is sited adjacent to the item, usually in front of the merchandise where it can easily be seen by the customer.  |
| DWR_ITEM_SLNG_RULE         | Item selling rule               | A set of commonly used selling rules for Items   |
| DWR_ITEM_SPIFF_RULE        | Item SPIFF Rule                 | Rule or condition to explain when an employee can receive a reward, or SPIFF.  |
| DWR_ITEM_TNDR_RSTRCT_GRP   | Item tender restriction group   | A collection of ITEMS which share a common restriction on the kind of tender that may be used to pay for them at a store.  |

**Table 3-1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>           | <b>Description</b>                | <b>Notes</b>   |
|-----------------------------|-----------------------------------|--|
| DWR_ITEM_TNDR_RSTRCT_RULE   | Item tender restriction rule      | An association between ITEM TENDER RESTRICTION GROUP and TENDER which constrains the use of a specific type of tender in the settlement of a sale for a specific ITEM.   |
| DWR_JB_RL                   | Job Roles                         | Job roles present in an organization.  |
| DWR_LCL_TAX_AUTH            | Local tax authority               | Government authority that levies sales taxes, imposes rules or statutory compliances   |
| DWR_LYLT_Y_AWARD            | Loyalty awards                    | The identification of a reward that the customer receives for satisfying the requirements of a promotion. Examples include premium gifts given when a customer has purchased a set dollar value of merchandise over a promotional period.  |
| DWR_MBRSHIP_ACCT            | Membership account                | Details for frequent shopper or membership points accounts.  |
| DWR_MEDIA                   | Media                             | Specific mass communication, such as Times Of India, Femina, PowerFM, or StarTV. Promotions are communicated through Media.  |
| DWR_MEDIA_DPCT_ITEM_ASGNMNT | MEDIA DEPICTION ITEM ASSIGNMENT   | Associate Media Depiction with Item.   |
| DWR_MKT_AREA                | Market Area                       | Market Area denotes a geographic area for which resident demographic data is available. Market Area may not contain a store. Trade Area and Market Area have been used interchangeably in this model. The definition of a trade or market area is the geographic region from which a town draws most of its retail customers. Here are some ways to define a trade area: <ul style="list-style-type: none"> <li>▪ Study traffic flow</li> <li>▪ Use a retail gravity model</li> <li>▪ Use a zip code method</li> <li>▪ Use commuting data to define the trade area boundaries</li> </ul> |
| DWR_MKT_AREA_LVL            | Market Area Level                 | Level of classification inside the market areas. this classification can be based on: <ul style="list-style-type: none"> <li>▪ Community which is the one set of demographic attributes as described in the demography entity.</li> <li>▪ Geographic</li> <li>▪ User defined criteria</li> </ul>   |
| DWR_MKT_ITEM_DEPT           | Market Item Department            | This entity holds Market Categories (corresponds to departments in product dimension).   |
| DWR_MKT_ITEM_DEPT_ASGNMNT   | Market Item Department Assignment | Maps owned (organization) departments to market departments.   |
| DWR_MNFCTR                  | Manufacturer                      | The external party that manufactures the ITEM.   |
| DWR_MNFCTR_CPN_FMLY         | MANUFACTURER COUPON FAMILY        | This lookup holds code assigned by the manufacturer to classify product for promotion purposes.<br><br>Examples: Raincheck Coupon, Manufacturer Coupon, Electronic Coupon  |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name          | Description   | Notes  |
|---------------------|---|--|
| DWR_MNT             | Minute  | This table contains information at the minute level.   |
| DWR_MO_TODATE_TRANS | Month ToDate Transformation   | Cumulative time transformations at the month level.  |
| DWR_MO_TRANS        | Month transformations information.  | Transformations for a month. Example: this month last year, this year last month and others.   |
| DWR_ORG_AREA        | Organization Area   | Areas within an organization chain<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .   |
| DWR_ORG_BNR         | Organization Banner   | Holds the information about different organization banners under which the items are sold<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .  |
| DWR_ORG_BSNS_ENT    | Organization business entity  | Business Entity in an Organization represent any logical entity that is recognized as an enterprise for Business analysis and transactions. Possible classifications for a Business Entity can include, Company, Operation Units, Stores, or Warehouse.  |
| DWR_ORG_BSNS_UNIT   | <ul style="list-style-type: none"> <li>■ Distribution Center</li> <li>■ Organization Catalogue</li> <li>■ Organization Warehouse</li> <li>■ Organization Store</li> <li>■ Organization Web Store</li> <li>■ Organization Business Unit</li> </ul> | <p>Business units include:</p> <ul style="list-style-type: none"> <li>■ A Distribution Center for a set of products is a warehouse or other specialized building with refrigeration or air conditioning which are supplied by transport, such as aircraft, truck, rail or ship, and then re-distributed to retailers or wholesalers.</li> <li>■ An Organization Catalogue is a publication, such as a book or pamphlet, containing list or itemized display of titles, course offerings, or articles for exhibition or sale, usually including descriptive information or illustrations. For example, a catalog of fall fashions; a seed catalog. A place in which goods or merchandise are stored; a storehouse.</li> <li>■ An Organization Store is a fixed location from where goods and merchandise are sold for personal or household consumption.</li> <li>■ An Organization Web Store is a Web site owned or commissioned by the organization from where goods and merchandise are sold for personal or household consumption.</li> <li>■ An Organization Business Unit is a place from where organization conducts its business which could be a store, distribution center, warehouse, web-store or catalogue.</li> </ul> <p>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .</p> |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name                  | Description                             | Notes  |
|-----------------------------|---|--|
| DWR_ORG_CHAIN               | Organization Chain                      | Chain of outlets through which the organization conducts business.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 . |
| DWR_ORG_DEMOG_VAL           | Organization demography value           | Stores the Demography Values for the Organization. The demographic values for organization can be: Start date of Organization Revenue band Profit band Product or Service Category Head count Number of offices or sites   |
| DWR_ORG_DEPT                | Organization department                 | A specialized section of a store   |
| DWR_ORG_DIV                 | Organization division                   | Organization Division within Organization hierarchy.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .               |
| DWR_ORG_DSTRCT              | Organization District                   | Holds districts within a company, chain, area, region.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .             |
| DWR_ORG_HRCHY               | Organization hierarchy                  | Master list of all the hierarchies inside an organization.   |
| DWR_ORG_HRCHY_LVL           | Organization hierarchy levels           | The association table for the hierarchies and levels.  |
| DWR_ORG_HRCHY_LVL_ASSIGNMNT | Organization hierarchy level assignment | Assignment table for Hierarchy levels to the Business Entities.  |
| DWR_ORG_HRCHY_VRSN          | Organization hierarchy version          | The version table for the hierarchies.   |
| DWR_ORG_LVL                 | Organization level                      | List of all the business levels inside the organization.   |
| DWR_ORG_LVL_ATTR            | Organization Level Attributes           | Attributes applicable only to the corresponding level in the organization. Possible values that can be stored in this entity can be, Regional Language   |
| DWR_ORG_LVL_ATTR_VAL        | Organization Level Attribute Value      | Attributes of a business entity  |
| DWR_ORG_MKT_DATA            | Organization Market Data                | Market related information about an Organization.  |
| DWR_ORG_RGN                 | Organization Region                     | Holds region within a company, chain area.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .                         |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>          | <b>Description</b>            | <b>Notes</b>  |
|----------------------------|-------------------------------|---|
| DWR_PAY_DTL                | Pay Detail                    | Payouts from the payroll department. The payout could be compensation amount given to an employee under a payroll category and type, or it could be a contribution from the company toward the employee, under a payroll category and type.   |
| DWR_PERIOD_TODATE_TRANS    | Period To Date Transformation | Transformation rules for a period. Example: this period last year, this year last period and others.  |
| DWR_PERIOD_TRANS           | Period transformation         | Holds time transformations at the period level.   |
| DWR_PHS                    | Phase                         | Periods of time within a season. Each day should fall within no more than one phase   |
| DWR_PLNG_PERIOD            | Planning period               | Period level in the planning calendar.  |
| DWR_PLNG_QTR               | Planning quarter              | Quarter level in the planning calendar.   |
| DWR_PLNG_SEASON            | Planning Season               | Captures plan season information.   |
| DWR_PLNG_SEASON_WK_ASGNMNT | Plan Season Week Assignment   | Captures information about plan season and respective week relationships.   |
| DWR_PLNG_WK                | Planning week                 | Week level in the planning calendar.  |
| DWR_PLNG_YR                | Planning year                 | Year level in the planning calendar.  |
| DWR_POSTCD                 | Post Code                     | Postal codes of interest to the Retail Organization   |
| DWR_POS_DEPT               | POS Department                | A grouping of items with similar point of sale control and processing attributes. This entity type may also be used to control sales that are not properly identified at the item level   |
|                            | POS Identity                  | A simple cross-reference between the barcode, point of sale scan code or other keyed identifying number used at the Point of Sale (POS) and the internal stock keeping Item ID for the item. The POS Item ID is typically filled with the Global Trade Item Number (GTIN) (Universal Product Code [UPC], European Article Number [EAN], and others) for an item, but it is not mandatory. A retailer may develop and maintain its own set of POS identifiers. |
| DWR_PRICE_DRVTN_RULE       | Price Derivation Rule         | The specification of a method to be used to transform the current sell unit retail amount to the retail price actually paid by a customer at the point of sale.   |
| DWR_PRMTN                  | Promotion                     | The promotion reflects the tactics a retailer undertakes to generate increased incremental sales volume for specific item-store combinations within a promotional event. Promotions are frequently communicated as part of a marketing campaign to ensure that awareness is generated with the target audience.   |
| DWR_PRMTN_SLNG_ITEM        | Promotion Item Sale Item      | The items on promotion that are actually sold. There could be many items which are on promotion. Out of which some items are actually sold and some are not (as perhaps they do not worth, in terms of extra sales generated, time spent and effort) This dimension holds only those items which are sold.  |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>      | <b>Description</b>  | <b>Notes</b>  |
|------------------------|---|---|
| DWR_PROD_ENT           | Product entity  | Identifying information for Item at the various levels it may be referred to, such as SKU, Item Number, Item Department.  |
| DWR_PRSPCT             | Prospect quick facts, prospect individual, prospect organization, or prospect profile | Prospect quick facts: Collection of Prospect related measures<br>Prospect individual: Prospect attributes of an individual. Sub type of Prospect.<br>Product organization: Prospect attributes for an organization.<br>Prospect profiles: List of the prospects, that is, prospective customers |
| DWR_PRSPCT_RSTRCT_INFO | Prospect Restricted Info  | This tables stores confidential information regarding the prospect, like the date of birth or national identifier of an employee.   |
| DWR_QTR_HR             | Quarter Hour  | This table contains information at the Quarter hour level.  |
| DWR_QTR_TODATE_TRANS   | Quarter Todate Transformation   | Cumulative time transformations at the quarter level.   |
| DWR_QTR_TRANS          | Quarter Transformation  | Transformation for a quarter. Example: this quarter last year, this year last quarter and others.   |
| DWR_RL_HRCHY           | Roles Hierarchy   | Hierarchy among the job roles within an organization  |
| DWR_RSTRCT_VALID_QUES  | Restriction Validation Question   | A standard question that may be asked of a Customer as part of the process of negotiating a SalesRestriction that has been placed upon a class of items.  |
| DWR_SEASON             | Season  | Holds seasons and their attributes. Seasons are arbitrary periods of time around which some retailers organize their buying and selling patterns. Each day should fall within no more than one season.  |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name                    | Description  | Notes   |
|-------------------------------|--|---|
| DWR_SKU_ITEM                  | SKU Item, Stock Item, Prepared, Select Group, Service, Aggregate | <p>A <b>SKU Item</b> or Stock Keeping Unit is the unit identification (typically the UPC) that is used to track store inventory and sales. Each SKU is attached to an item, variant, product line, bundle, service, fee or attachment.</p> <p>SKU subtypes are:</p> <ul style="list-style-type: none"> <li>■ <b>Stock Item</b> is a SKU item that is booked into inventory.</li> <li>■ <b>Prepared:</b> A sub-type of SKU Item that is manufactured (or prepared) for sale from a set of Bulk Items with a Recipe which is different from Stock Item because a Prepared Item is not booked into inventory when the item is manufactured; nor is it removed from inventory when it is sold; rather the inventory for the Bulk Item constituent parts as defined by the recipe is reduced when the Prepared Item is sold.</li> <li>■ <b>Select Group:</b> A type of SKU Item that indicates a grouping of items from which the customer may choose for the designated price. The choice of item(s) is made by the customer at the POS.</li> <li>■ <b>Service:</b> A type of SKU that provides a detailed identifier and description for a service offered for sale to a customer in the retail store. This entity also identifies and describes rental items and other tangible items that are used by a customer for a contracted period, but not purchased.</li> <li>■ <b>Aggregate:</b> A sub-type of SKU that is an aggregation of one or more constituent SKUs. The constituent items may be sold individually.</li> </ul> <p>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See <a href="#">"Relational Views Used When Loading the Analytic Workspace"</a> on page 3-57 .</p> |
| DWR_SKU_ITEM_BSNS_UNIT_INV_RL | SKU Item Business Unit Inventory Rules                           | Maps SKU Item with Vendor and Organization Business Unit.   |
| DWR_SKU_ITEM_BU_SL_PRC        | SKU Item Business Unit Selling Price                             | Selling Price related information for a SKU item at a particular business unit  |
| DWR_SKU_ITEM_CHOICE           | Sku Item Choice  | A mapping from a parent GroupSelectItem to Item denoting a choice that may be made by the customer at the time of sale for a Group Select sale, package deal, or bill of material, in which several items are bundled under a single price, and the customer can make substitutions for some items from a list of choices for the bundle. Example: Ski package where the customer can choose one of several ski's, one of several ski poles, one of several goggles.  |

**Table 3-1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>         | <b>Description</b>  | <b>Notes</b>  |
|---------------------------|---|---|
| DWR_SKU_ITEM_COLLCTN      | SKU Collection  | Optional relationship between an item and its components and affiliates where the components consist of other SKUs. Note that this data structure is intended to support one and only one level of decomposition, affiliation, or both, between an SKU parent and its SKU's children.   |
| DWR_SKU_ITEM_CONSTRUCTION | SKU Item Construction   | An item fashioned or devised systematically   |
| DWR_SKU_ITEM_SHELF_ATTR   | SKU Item Shelf Attributes   | Specifications of the shelf on which the SKU items are kept.  |
| DWR_SKU_ITEM_SUB          | SKU Item substitution   | Refers to SKU Item which could be considered as a substitute for the SKU item in question. There may be cases; especially for complex items like "Car", which is a combination of several items; where the user would have the choice to pick different kinds of components. A corresponding price adjustment would happen depending on the component selection. In the case of Car example, Car is made up of several components which can be sold individually. Select tire component and one can substitute tire with several other brands of tire. In this example, SKU COLLECTION has one row and default tire brand given. Car would be a row in SKU entity and SKU substitution has as many rows as there are different brands available which can substitute the different brand. |
| DWR_SKU_ITEM_VRTY_ASGNMNT | SKU Item variety assignment   | Captures item attributes other than size, weight and style, such as color. If apparel can come in two colors, say red and blue, then this entity has two rows.  |
| DWR_SKU_ITEM_WT           | Weight  | Captures the weights the SKU is available in.   |
| DWR_SLNG_LOC              | Selling Location  | An area of floor space or shelf space within the Retail Store to which sales can be assigned. This space may be assigned to or rented to a Vendor.  |
| DWR_SLS_RSTRCT            | Age restriction rule<br>Item sales prohibition period rule<br>License Sales Restriction Sales Restriction | Defines a rule that restricts the sale of an SKU to customers that must be a minimum age and by the employee that must be a minimum age. Rules restricting the sale of an item. Examples: day, time, age of customer, age of operator for alcohol sales A restriction or limitation on the sales of a class of SKUs based on the purchasers profession, license, or other certification. A limitation that restricts the sale of a particular class of Item   |
| DWR_SRVC_TERM             | Service Term  | Terms and conditions for services provided by the store or by a third party. Normally the terms are in a separate document that the customer signs.   |
| DWR_STATUS                | Status  | Status for a particular status type   |
| DWR_STORE_SAFE            | Tender Repository Derived Store safe  | Holds tender details in different repositories like Safe, Till, or External Depository. A repository within the store for safekeeping TENDER removed from the TILL. Also used to secure petty cash and till loans   |
| DWR_TAX_EXMPT_CD          | Tax exempt code   | Entities represent a tax exemption for each item, customer and location combination   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>             | <b>Description</b>                       | <b>Notes</b>   |
|-------------------------------|--|--|
| DWR_TCHPNT                    | Store Workstation Call Center Touchpoint | A device used as an interface to any store business function. This includes the capture and storage of transactions and operational performance reporting, a department within a company or a third-party organization that handles telephone sales or service, a place where transactions occur, or a meeting point for customer and organization. Can be both logical and physical   |
| DWR_TNDR_RPSTRY               | Tender Repository table                  | The types of physical tender containers used in the retail enterprise. Tender repository generally includes assets like store safe(s) or tills.  |
| DWR_TIME_PLNG_SEASON_TD_BY_WK | Time Planning Season ToDate By Week      | Holds time transformation of plan season to date data by week.   |
| DWR_TIME_STNDRD_BY_DAY        | Time Standard By Day                     | Relationship between a given day and all days of a season up to that given day.  |
| DWR_TIME_STNDRD_BY_WK         | Time Standard By Week                    | Relationship between a given week and all days of a given season up to that week.  |
| DWR_TNDR                      | Tender                                   | Tender includes all the forms of payment that are accepted by the RETAIL STORE in settling sales and other transactions. Policies applicable for each tender type  |
| DWR_TRD_AREA                  | Trade Area                               | The geographic area serviced by a retail store or proposed retail store (a prospective location). The trade area is basically dictated by whether a consumer shops at the store. A retailer may have multiple trade areas for the site (primary, secondary, tertiary). Trade areas are defined so that retailers can determine the demographic, psychographic, or population data for the geography served by the store. This data is pulled from market area data, which is usually based on census blocks in the U.S. Basically the trade area provides a mechanism to map market area data to a specific store because the census blocks (or whatever is used to store the market area data) does not map to the geographic area served by a store. The definition of a trade or market area is the geographic region from which a town draws most of its retail customers. Examples of ways to define a trade area include Study traffic flow, Use a retail gravity model, Use a zip code method, and Use commuting data to define the trade area boundaries |
| DWR_TRD_AREA_COVRG            | Trade Area Coverage                      | Demographic and accessibility data for a given trade area.   |
| DWR_TRMS_MASTER               | Terms Master                             | Master data of terms of business with the vendor   |
| DWR_USERS                     | User                                     | Associative entity for Employee, Job Role, and Employee Actual Labor Hourly; associates a unique ID for every job role that an employee performs at a particular store. An employee appears only once in the Employee table, but in this table, the employee appears once for each job role at each store.   |
| DWR_VALID_QUES_ASGNMNT        | Validation Question Assignment           | Associates Restriction Validation Question to Sales Restriction  |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| <b>Table Name</b>              | <b>Description</b>                   | <b>Notes</b>   |
|--------------------------------|--------------------------------------|--|
| DWR_VAL_MSR                    | Value measure                        | Value measure stores the measure of the value. For example a customer or a profile can be valued in terms of monetary value or time (he is our customer for next 3 years). This table also stores the Recency, Frequency, and Monetary Value (RFM) score value measures, like the number of visits.                    |
| DWR_VNDR                       | Vendor                               | External source for merchandise and goods that the retail store offers or for supplies and goods that the store uses.  |
| DWR_VNDR_APNMNT                | Vendor appointment                   | This entity store the vendor appointment details. Vendor appoints are the regular visits by vendor's representative to the retail organization site  |
| DWR_VNDR_CARRIER_ASGNMNT       | Vendor Carrier                       | Associative entity for Vendor and Carrier; maps vendors and their various carriers   |
| DWR_VNDR_CNTRCT                | Vendor Contract                      | The details of contract with Vendor.   |
| DWR_VNDR_FCTR_CMPNY_ASGNMNT    | Vendor Factor                        | This captures the information of the various factor companies used by the vendor.  |
| DWR_VNDR_ITEM                  | Vendor Item                          | Associative entity between Vendor and Item; maps a vendor-specific item to a retail item and provides the vendor-specific attributes to the item. Used for ordering from a vendor price list, catalog, or other resource. Provides the vendor's view of the item and uses the vendor's description of item attributes. |
| DWR_VNDR_ITEM_BSNS_UNIT_ASGN   | Vendor Item Business Unit Assignment | This entity shows relationship between vendor, Item and Organization Business Unit.  |
| DWR_VNDR_ITEM_SKU_ASGNMNT      | Vendor Item Sku Assignment           | Associates vendor with item SKU.   |
| DWR_VNDR_MNFCTR_BRAND          | Vendor Manufacturer Brand            | Associative entity for Vendor, Manufacturer, and Brand.  |
| DWR_VNDR_RTNG                  | Vendor Rating                        | This entity captures the rating of the vendor  |
| DWR_VNDR_SITE                  | Vendor Site                          | This entity captures the information of various vendor sites. For example a vendor might have multiple offices, warehouse, despatch centres, or liaison offices.   |
| DWR_VNDR_SITE_ADDR             | Vendor address                       | Vendor address is an association table between the Vendor Site or Vendor and the address location  |
| DWR_VNDR_SKU_BSNS_UNIT_ASGNMNT | Vendor SKU Business Unit Assignment  | This entity shows relationship between SKU Item, Vendor and Organization Business Unit.  |
| DWR_VNDR_STATUS                | Vendor status                        | Status of a vendor. Indicates if the vendor is presently being used or on suspension.  |
| DWR_VRTY                       | Variety                              | Item attribute other than size, weight, and style, such as color.  |
| DWR_WKDAY                      | WeekDay                              | Holds information relating to calendar weekdays. It is used to relate weekdays to day identifiers.   |
| DWR_WK_TODATE_TRANS            | Week ToDate Transformation           | Cumulative time transformations at the week level.   |

**Table 3–1 (Cont.) Reference Tables, Descriptions, and Notes**

| Table Name      | Description          | Notes  |
|-----------------|----------------------|--|
| DWR_WK_TRANS    | Week transformation  | Transformation for a week. Example: this week last year, this year last week and others.   |
| DWR_WRKSTN_DISP | Work Station Display | A physical display for Items near the workstation, usually intended for impulse purchases. Examples include magazines, candy, gift cards, and calendars. |
| DWR_YR_TRANS    | Year transformations | Holds time transformations at the year level.  |

## Lookup Tables

The Lookup tables are listed in [Table 3–2](#).

**Table 3–2 Lookup Table Names, Descriptions, and Notes**

| Table Name              | Description                | Notes  |
|-------------------------|----------------------------|--|
| DWL_ANALYSIS_DURATION   | Analysis Duration          | A period of time. Can extend over 2 or more days   |
| DWL_CERTIFICATE_AGE_BND | Certificate Age Band       | This lookup table holds static Certificate age bands. These age bands are used to categorize based on their age. Each age band is a client-defined range of age in days. The age of a certificate is used to determine the age band into which it falls. |
| DWL_CODE_MASTER         | Code Master Table          | Contains non-hierarchical lookup types and corresponding values.   |
| DWL_COMUNICTN_TYP       | Communication Type         | Type of communication, for example, telephone, paper or e-mail. This entity holds the name of communication and the format along with the communication code.  |
| DWL_CRNCY               | Currency                   | Specifies the national designation and quantitative value of monetary media used as tender in the processing of this TENDER LINE ITEM.   |
| DWL_DENMTN              | Denomination               | Specifies the quantitative value of the referenced CURRENCY media  |
| DWL_DISC_TYP            | Discount types             | Captures the various types of discount. Examples of discount types include quantity discount or cash discount.   |
| DWL_INV_STATUS          | Inventory Status           | Captures different states of the inventory like work-in-progress, manufactured, or finished.   |
| DWL_MEDIA_TYP           | Media Type                 | Description of Media Type. Examples include TV, radio, newspaper, and list.  |
| DWL_MNFCTR_CPN_FMLY     | Manufacturer Coupon Family | Code assigned by the manufacturer to classify product for promotion purposes.  |
| DWL_ORDR_STATUS         | Order Status               | Lookup for the different types of Order Status like Already Shipped, Delivered, Processing, or Partially Delivered.  |
| DWL_ORDR_STATUS_TYP     | Order Status Type          | Lookup for the different types of order status type.   |
| DWL_PAY_TYP             | Pay Type                   | Various pay types under the different categories.  |
| DWL_RFMP_MTHD           | RFMP Method                | Lookup to hold the different methods of calculating the Recency Frequency Monetary and Profitability Scores  |
| DWL_RSN                 | Reason                     | Reason codes and descriptions  |

**Table 3–2 (Cont.) Lookup Table Names, Descriptions, and Notes**

| Table Name                | Description                    | Notes  |
|---------------------------|--------------------------------|--|
| DWL_RSN_CTGRY             | Reason Category                | This lookup holds reason type codes and their descriptions. Example in include Urgent, Quality, or Other.  |
| DWL_STORE_FINCL_LDGR_ACCT | Store Financial Ledger Account | Journal Accounts for the accumulation of certain transactions and charges.   |
| DWL_SZ                    | Size                           | Captures the size details of the SKU.  |
| DWL_TAXBL_GRP             | Tax Group                      | A group of Items for which a TaxAuthority defines TaxGroupRules  |
| DWL_TAX_AUTH              | Tax Authority                  | A government authority that levies sales taxes and on whose behalf the store collects these sales taxes.   |
| DWL_TAX_EXMPTN            | Term Code                      | Holds information of different terms like sales.   |
| DWL_TIME_ZN               | Time Zone                      | Location in the world relative to Greenwich Mean Time (GMT) in Greenwich, England.   |
| DWL_TNDR_TYP              | Tender Type                    | Holds all the tender type IDs and their parent tender type groups. The tender type dimension is composed of one table (TNDR_TYPE_DM) and one view (TNDR_TYPE_GRP_DM). An example of a tender type group is Credit Card". Examples of tender type IDs that belong to this group are "American Express", "Master Card" or "Discover Card". |
| DWL_TRX_TYP               | Transaction Type               | A specific designator that indicates what type of transaction has been captured through a work station. Examples include Sale, Return, Sale Reversal, or Return Reversal.  |
| DWL_UOM                   | Unit of Measure                | Identifies and describes valid units of measure that are used throughout the model.  |

## Database Sequences

Database sequences for Oracle Retail Data Model are listed in [Table 3–3](#).

**Table 3–3 Database Sequences**

| Sequence Name          | Generates the Physical Key for This Table |
|------------------------|---|
| ADDR_LOC_HIST_SEQ      | DWR_ADDR_LOC_HIST                         |
| ADDR_LOC_SEQ           | DWR_ADDR_LOC                              |
| ADDR_PHONE_SEQ         | DWR_ADDR_PHONE                            |
| ADDR_RLTD_SEQ          | DWR_ADDR_RLTD                             |
| ADVR_PERIOD_SEQ        | DWR_ADVR_PERIOD                           |
| ADVR_QTR_SEQ           | DWR_ADVR_QTR                              |
| ADVR_WK_SEQ            | DWR_ADVR_WK                               |
| ADVR_YR_SEQ            | DWR_ADVR_YR                               |
| ALTVE_ITEM_SEQ         | DWR_ALTVE_ITEM                            |
| APNMNT_SEQ             | DWR_APNMNT                                |
| BRND_SEQ               | DWR_BRND                                  |
| BSNS_ENT_SLNG_RULE_SEQ | DWR_BSNS_ENT_SLNG_RULE                    |

**Table 3–3 (Cont.) Database Sequences**

| <b>Sequence Name</b>          | <b>Generates the Physical Key for This Table</b> |
|-------------------------------|--|
| BSNS_ENT_TNDR_RSTRCT_RULE_SEQ | DWR_BSNS_ENT_TNDR_RSTRCT_RULE                    |
| BSNS_MO_SEQ                   | DWR_BSNS_MO                                      |
| BSNS_QTR_SEQ                  | DWR_BSNS_QTR                                     |
| BSNS_UNIT_JB_RL_SEQ           | DWR_BSNS_UNIT_JB_RL                              |
| BSNS_UNIT_SEQ                 | DWR_BSNS_UNIT                                    |
| BSNS_UNIT_SHFT_SEQ            | DWR_BSNS_UNIT_SHFT                               |
| BSNS_WK_SEQ                   | DWR_BSNS_WK                                      |
| BSNS_YR_SEQ                   | DWR_BSNS_YR                                      |
| CARRIER_SEQ                   | DWR_CARRIER                                      |
| CERTIFICATE_SEQ               | DWR_CERTIFICATE                                  |
| CLNDR_HLF_MO_SEQ              | DWR_CLNDR_HLF_MO                                 |
| CLNDR_HLF_YR_SEQ              | DWR_CLNDR_HLF_YR                                 |
| CLNDR_MO_SEQ                  | DWR_CLNDR_MO                                     |
| CLNDR_QTR_SEQ                 | DWR_CLNDR_QTR                                    |
| CLNDR_WK_SEQ                  | DWR_CLNDR_WK                                     |
| CLNDR_YR_SEQ                  | DWR_CLNDR_YR                                     |
| CMPGN_CUST_ASGNMNT_SEQ        | DWR_CMPGN_CUST_ASGNMNT                           |
| CMPGN_EXECUTION_MSG_SEQ       | DWR_CMPGN_EXECUTION_MSG                          |
| CMPGN_MEDIA_LAUNCH_SEQ        | DWR_CMPGN_MEDIA_LAUNCH                           |
| CMPGN_MEDIA_SEQ               | DWR_CMPGN_MEDIA                                  |
| CMPGN_MEDIA_SLNG_ITEM_SEQ     | DWR_CMPGN_MEDIA_SLNG_ITEM                        |
| CMPGN_MSG_DPCT_SEQ            | DWR_CMPGN_MSG_DPCT                               |
| CMPGN_MSG_RNDRNG_SEQ          | DWR_CMPGN_MSG_RNDRNG                             |
| CMPGN_SEQ                     | DWR_CMPGN  |
| CMPNY_SEQ                     | DWR_CMPNY  |
| CMPTR_LOC_SEQ                 | DWR_CMPTR_LOC                                    |
| CMPTR_RTL_ITEM_SEQ            | DWR_CMPTR_RTL_ITEM                               |
| CMPTR_SEQ                     | DWR_CMPTR  |
| CREA_SEQ                      | DWR_CREA   |
| CUST_ACCT_SEQ                 | DWR_CUST_ACCT                                    |
| CUST_ADDR_SEQ                 | DWR_CUST_ADDR                                    |
| CUST_AFFLTN_SEQ               | DWR_CUST_AFFLTN                                  |
| CUST_CLSTR_SEQ                | DWR_CUST_CLSTR                                   |
| CUST_GRP_ITEM_SEQ             | DWR_CUST_GRP_ITEM                                |
| CUST_GRP_SEQ                  | DWR_CUST_GRP                                     |
| CUST_OCCSN_SEQ                | DWR_CUST_OCCSN                                   |
| CUST_PREF_SEQ                 | DWR_CUST_PREF                                    |

**Table 3–3 (Cont.) Database Sequences**

| <b>Sequence Name</b>     | <b>Generates the Physical Key for This Table</b> |
|--------------------------|--|
| CUST_RLTNSHP_SEQ         | DWR_CUST_RLTNSHP                                 |
| CUST_RSTRCTD_INFO_SEQ    | DWR_CUST_RSTRCTD_INFO                            |
| CUST_SEQ                 | DWR_CUST   |
| CUST_STATUS_SEQ          | DWR_CUST_STATUS                                  |
| DAY_SEQ                  | DWR_DAY  |
| DAY_TODATE_TRANS_SEQ     | DWR_DAY_TODATE_TRANS                             |
| DAY_TRANS_SEQ            | DWR_DAY_TRANS                                    |
| DEAL_SEQ                 | DWB_DEAL   |
| DEAL_VNDR_ITEM_SEQ       | DWR_DEAL_VNDR_ITEM                               |
| DEMOG_ATTR_SEQ           | DWR_DEMOG_ATTR                                   |
| DEMOG_GRP_SEQ            | DWR_DEMOG_GRP                                    |
| DPST_RULE_SEQ            | DWR_DPST_RULE                                    |
| DRVD_VAL_SEQ             | DWR_DRVD_VAL                                     |
| DSCRPNCY_TOLRNC_RULE_SEQ | DWR_DSCRPNCY_TOLRNC_RULE                         |
| EMAIL_ADDR_SEQ           | DWR_EMAIL_ADDR                                   |
| EMP_ACT_LBR_HRLY_SEQ     | DWR_EMP_ACT_LBR_HRLY                             |
| EMP_ACT_LBR_SAL_SEQ      | DWR_EMP_ACT_LBR_SAL                              |
| EMP_ADDR_SEQ             | DWR_EMP_ADDR                                     |
| EMP_DESIG_SEQ            | DWR_EMP_DESIG                                    |
| EMP_DISC_GRP_SEQ         | DWR_EMP_DISC_GRP                                 |
| EMP_RSTRCTD_INFO_SEQ     | DWR_EMP_RSTRCTD_INFO                             |
| EMP_SCHL_SEQ             | DWR_EMP_SCHL                                     |
| EMP_SEQ                  | DWR_EMP  |
| EMP_TRNG_REC_SEQ         | DWR_EMP_TRNG_REC                                 |
| EVNT_SEQ                 | DWR_EVNT   |
| FCTR_CMPNY_SEQ           | DWR_FCTR_CMPNY                                   |
| FSCL_HLF_MO_SEQ          | DWR_FSCL_HLF_MO                                  |
| FSCL_HLF_YR_SEQ          | DWR_FSCL_HLF_YR                                  |
| FSCL_MO_SEQ              | DWR_FSCL_MO                                      |
| FSCL_QTR_SEQ             | DWR_FSCL_QTR                                     |
| FSCL_WK_SEQ              | DWR_FSCL_WK                                      |
| FSCL_YR_SEQ              | DWR_FSCL_YR                                      |
| GEOG_DEMOG_ATTR_SEQ      | DWR_GEOG_DEMOG_ATTR                              |
| GEOG_DEMOG_GRP_SEQ       | DWR_GEOG_DEMOG_GRP                               |
| GEOG_DEMOG_VAL_SEQ       | DWR_GEOG_DEMOG_VAL                               |
| GEOG_ENT_SEQ             | DWR_GEOG_ENT                                     |
| GEOG_HRCHY_LVL_SEQ       | DWR_GEOG_HRCHY_LVL                               |

**Table 3–3 (Cont.) Database Sequences**

| <b>Sequence Name</b>       | <b>Generates the Physical Key for This Table</b> |
|----------------------------|--|
| GEOG_HRCHY_SEQ             | DWR_GEOG_HRCHY                                   |
| GEOG_HRCHY_VRSN_SEQ        | DWR_GEOG_HRCHY_VRSN                              |
| GEOG_LVL_ATTR_SEQ          | DWR_GEOG_LVL_ATTR                                |
| GEOG_LVL_ATTR_VAL_SEQ      | DWR_GEOG_LVL_ATTR_VAL                            |
| GEOG_LVL_SEQ               | DWR_GEOG_LVL                                     |
| HH_SEQ                     | DWR_HH   |
| HLF_HR_SEQ                 | DWR_HLF_HR                                       |
| HLF_MO_SEQ                 | DWR_HLF_MO                                       |
| HLF_MO_TODATE_TRANS_SEQ    | DWR_HLF_MO_TODATE_TRANS                          |
| HLF_MO_TRANS_SEQ           | DWR_HLF_MO_TRANS                                 |
| HLF_YR_SEQ                 | DWR_HLF_YR                                       |
| HLF_YR_TODATE_TRANS_SEQ    | DWR_HLF_YR_TODATE_TRANS                          |
| HLF_YR_TRANS_SEQ           | DWR_HLF_YR_TRANS                                 |
| HR_SEQ                     | DWR_HR   |
| INDVL_DEMOG_VAL_SEQ        | DWR_INDVL_DEMOG_VAL                              |
| INV_LOC_SEQ                | DWR_INV_LOC                                      |
| ITEM_CLASS_SEQ             | DWR_ITEM_CLASS                                   |
| ITEM_CLSTR_SEQ             | DWR_ITEM_CLSTR                                   |
| ITEM_CTGRY_SEQ             | DWR_ITEM_CTGRY                                   |
| ITEM_DEPT_SEQ              | DWR_ITEM_DEPT                                    |
| ITEM_DIV_SEQ               | DWR_ITEM_DIV                                     |
| ITEM_GRP_SEQ               | DWR_ITEM_GRP                                     |
| ITEM_HRCHY_LVL_ASGNMNT_SEQ | DWR_ITEM_HRCHY_LVL_ASGNMNT                       |
| ITEM_HRCHY_LVL_SEQ         | DWR_ITEM_HRCHY_LVL                               |
| ITEM_HRCHY_SEQ             | DWR_ITEM_HRCHY                                   |
| ITEM_HRCHY_VRSN_SEQ        | DWR_ITEM_HRCHY_VRSN                              |
| ITEM_LVL_ATTR_SEQ          | DWR_ITEM_LVL_ATTR                                |
| ITEM_LVL_ATTR_VAL_SEQ      | DWR_ITEM_LVL_ATTR_VAL                            |
| ITEM_LVL_SEQ               | DWR_ITEM_LVL                                     |
| ITEM_MKT_DATA_SEQ          | DWR_ITEM_MKT_DATA                                |
| ITEM_SBC_SEQ               | DWR_ITEM_SBC                                     |
| ITEM_SBDEPT_SEQ            | DWR_ITEM_SBDEPT                                  |
| ITEM_SEASON_SEQ            | DWR_ITEM_SEASON                                  |
| ITEM_SEQ                   | DWR_ITEM   |
| ITEM_SHELF_LABEL_SEQ       | DWR_ITEM_SHELF_LABEL                             |
| ITEM_SLNG_RULE_SEQ         | DWR_ITEM_SLNG_RULE                               |
| ITEM_SPIFF_RULE_SEQ        | DWR_ITEM_SPIFF_RULE                              |

**Table 3–3 (Cont.) Database Sequences**

| <b>Sequence Name</b>        | <b>Generates the Physical Key for This Table</b> |
|-----------------------------|--|
| ITEM_TNDR_RSTRCT_GRP_SEQ    | DWR_ITEM_TNDR_RSTRCT_GRP                         |
| ITEM_TNDR_RSTRCT_RULE_SEQ   | DWR_ITEM_TNDR_RSTRCT_RULE                        |
| JB_RL_SEQ                   | DWR_JB_RL  |
| LCL_TAX_AUTH_SEQ            | DWR_LCL_TAX_AUTH                                 |
| LYLTY_AWARD_SEQ             | DWR_LYLYTY_AWARD                                 |
| MBRSHIP_ACCT_SEQ            | DWR_MBRSHIP_ACCT                                 |
| MEDIA_DPCT_ITEM_ASGNMNT_SEQ | DWR_MEDIA_DPCT_ITEM_ASGNMNT                      |
| MEDIA_SEQ                   | DWR_MEDIA  |
| MEDIA_SLNG_ITEM_DPCT_SEQ    | DWR_MEDIA_SLNG_ITEM_DPCT                         |
| MEDIA_TYP_SEQ               | DWR_MEDIA_TYP                                    |
| MKT_AREA_LVL_SEQ            | DWR_MKT_AREA_LVL                                 |
| MKT_AREA_SEQ                | DWR_MKT_AREA                                     |
| MKT_ITEM_DEPT_SEQ           | DWR_MKT_ITEM_DEPT                                |
| MNFCTR_SEQ                  | DWR_MNFCTR                                       |
| MNT_SEQ                     | DWR_MNT  |
| MO_TODATE_TRANS_SEQ         | DWR_MO_TODATE_TRANS                              |
| MO_TRANS_SEQ                | DWR_MO_TRANS                                     |
| ORG_AREA_SEQ                | DWR_ORG_AREA                                     |
| ORG_BNR_SEQ                 | DWR_ORG_BNR                                      |
| ORG_BSNS_ENT_SEQ            | DWR_ORG_BSNS_ENT                                 |
| ORG_BSNS_UNIT_SEQ           | DWR_ORG_BSNS_UNIT                                |
| ORG_CHAIN_SEQ               | DWR_ORG_CHAIN                                    |
| ORG_DEMOG_VAL_SEQ           | DWR_ORG_DEMOG_VAL                                |
| ORG_DEPT_SEQ                | DWR_ORG_DEPT                                     |
| ORG_DSTRCT_SEQ              | DWR_ORG_DSTRCT                                   |
| ORG_HRCHY_LVL_ASGNMNT_SEQ   | DWR_ORG_HRCHY_LVL_ASGNMNT                        |
| ORG_HRCHY_LVL_SEQ           | DWR_ORG_HRCHY_LVL                                |
| ORG_HRCHY_SEQ               | DWR_ORG_HRCHY                                    |
| ORG_HRCHY_VRSN_SEQ          | DWR_ORG_HRCHY_VRSN                               |
| ORG_LVL_ATTR_SEQ            | DWR_ORG_LVL_ATTR                                 |
| ORG_LVL_ATTR_VAL_SEQ        | DWR_ORG_LVL_ATTR_VAL                             |
| ORG_LVL_SEQ                 | DWR_ORG_LVL                                      |
| ORG_MKT_DATA_SEQ            | DWR_ORG_MKT_DATA                                 |
| ORG_RGN_SEQ                 | DWR_ORG_RGN                                      |
| PAY_DTL_SEQ                 | DWR_PAY_DTL                                      |
| PAY_TYP_SEQ                 | DWR_PAY_TYP                                      |
| PERIOD_TODATE_TRANS_SEQ     | DWR_PERIOD_TODATE_TRANS                          |

**Table 3–3 (Cont.) Database Sequences**

| <b>Sequence Name</b>           | <b>Generates the Physical Key for This Table</b> |
|--------------------------------|--|
| PERIOD_TRANS_SEQ               | DWR_PERIOD_TRANS                                 |
| PHS_SEQ                        | DWR_PHS  |
| PLNG_PERIOD_SEQ                | DWR_PLNG_PERIOD                                  |
| PLNG_QTR_SEQ                   | DWR_PLNG_QTR                                     |
| PLNG_SEASON_SEQ                | DWR_PLNG_SEASON                                  |
| PLNG_WK_SEQ                    | DWR_PLNG_WK                                      |
| PLNG_YR_SEQ                    | DWR_PLNG_YR                                      |
| POSTCD_SEQ                     | DWR_POSTCD                                       |
| POS_DEPT_SEQ                   | DWR_POS_DEPT                                     |
| POS_IDNT_SEQ                   | DWR_POS_IDNT                                     |
| PRICE_DRVTN_RULE_SEQ           | DWR_PRICE_DRVTN_RULE                             |
| PRMTN_ITM_SEQ                  | DWR_PRMTN_ITM                                    |
| PRMTN_MEDIA_COST_SEQ           | DWR_PRMTN_MEDIA_COST                             |
| PRMTN_PRICE_DRVTN_SEQ          | DWR_PRMTN_PRICE_DRVTN                            |
| PRMTN_SEQ                      | DWR_PRMTN  |
| PRMTN_SLNG_ITEM_SEQ            | DWR_PRMTN_SLNG_ITEM                              |
| PROD_ENT_SEQ                   | DWR_PROD_ENT                                     |
| PRSPCT_RSTRCT_INFO_SEQ         | DWR_PRSPCT_RSTRCT_INFO                           |
| QTR_HR_SEQ                     | DWR_QTR_HR                                       |
| QTR_TODATE_TRANS_SEQ           | DWR_QTR_TODATE_TRANS                             |
| QTR_TRANS_SEQ                  | DWR_QTR_TRANS                                    |
| RL_HRCHY_SEQ                   | DWR_RL_HRCHY                                     |
| RSTRCT_VALID_QUES_SEQ          | DWR_RSTRCT_VALID_QUES                            |
| SEASON_SEQ                     | DWR_SEASON                                       |
| SKU_ITEM_BSNS_UNT_SLNG_PRC_SEQ | DWR_SKU_ITEM_BSNS_UNT_SLNG_PRC                   |
| SKU_ITEM_CHOICE_SEQ            | DWR_SKU_ITEM_CHOICE                              |
| SKU_ITEM_COLLCTN_SEQ           | DWR_SKU_ITEM_COLLCTN                             |
| SKU_ITEM_CONSTRUCTION_SEQ      | DWR_SKU_ITEM_CONSTRUCTION                        |
| SKU_ITEM_SEQ                   | DWR_SKU_ITEM                                     |
| SKU_ITEM_SHELF_ATTR_SEQ        | DWR_SKU_ITEM_SHELF_ATTR                          |
| SKU_ITEM_SLNG_PRICE_HIST_SEQ   | DWR_SKU_ITEM_SLNG_PRICE_HIST                     |
| SKU_ITEM_SLNG_PRICE_SEQ        | DWR_SKU_ITEM_SLNG_PRICE                          |
| SKU_ITEM_SUB_SEQ               | DWR_SKU_ITEM_SUB                                 |
| SKU_ITEM_WT_SEQ                | DWR_SKU_ITEM_WT                                  |
| SKU_ITM_BSNS_UNT_INV_RULES_SEQ | DWR_SKU_ITM_BSNS_UNT_INV_RULES                   |
| SLNG_LOC_SEQ                   | DWR_SLNG_LOC                                     |
| SLS_RSTRCT_SEQ                 | DWR_SLS_RSTRCT                                   |

**Table 3–3 (Cont.) Database Sequences**

| <b>Sequence Name</b>            | <b>Generates the Physical Key for This Table</b> |
|---------------------------------|--|
| SRVC_TERM_SEQ                   | DWR_SRVC_TERM                                    |
| STATUS_SEQ                      | DWR_STATUS                                       |
| SZ_SEQ                          | DWR_SZ   |
| TAX_EXMPT_CD_SEQ                | DWR_TAX_EXMPT_CD                                 |
| TCHPNT_SEQ                      | DWR_TCHPNT                                       |
| TIME_PLNG_SEASON_TODATE_WK_SEQ  | DWR_TIME_PLNG_SEASON_TODATE_WK                   |
| TIME_STNDRD_BY_DAY_SEQ          | DWR_TIME_STNDRD_BY_DAY                           |
| TIME_STNDRD_BY_WK_SEQ           | DWR_TIME_STNDRD_BY_WK                            |
| TIME_ZN_SEQ                     | DWR_TIME_ZN                                      |
| TNDR_SEQ                        | DWR_TNDR   |
| TRD_AREA_COVRG_SEQ              | DWR_TRD_AREA_COVRG                               |
| TRD_AREA_SEQ                    | DWR_TRD_AREA                                     |
| TRMS_MASTER_SEQ                 | DWR_TRMS_MASTER                                  |
| USERS_SEQ                       | DWR_USERS  |
| VAL_MSR_SEQ                     | DWR_VAL_MSR                                      |
| VNDR_ADDR_SEQ                   | DWR_VNDR_ADDR                                    |
| VNDR_APNMNT_SEQ                 | DWR_VNDR_APNMNT                                  |
| VNDR_CARRIER_ASGNMNT_SEQ        | DWR_VNDR_CARRIER_ASGNMNT                         |
| VNDR_CLASS_SEQ                  | DWR_VNDR_CLASS                                   |
| VNDR_CNTRCT_SEQ                 | DWR_VNDR_CNTRCT                                  |
| VNDR_FCTR_SEQ                   | DWR_VNDR_FCTR                                    |
| VNDR_ITEM_BSNS_UNIT_ASGNMNT_SEQ | DWR_VNDR_ITEM_BSNS_UNIT_ASGNMNT                  |
| VNDR_ITEM_SEQ                   | DWR_VNDR_ITEM                                    |
| VNDR_ITEM_SKU_ASGNMNT_SEQ       | DWR_VNDR_ITEM_SKU_ASGNMNT                        |
| VNDR_MNFCTR_BRAND_SEQ           | DWR_VNDR_MNFCTR_BRAND                            |
| VNDR_RTNG_SEQ                   | DWR_VNDR_RTNG                                    |
| VNDR_SEQ                        | DWR_VNDR   |
| VNDR_SITE_SEQ                   | DWR_VNDR_SITE                                    |
| VNDR_SKU_BSNS_UNIT_ASGNMNT_SEQ  | DWR_VNDR_SKU_BSNS_UNIT_ASGNMNT                   |
| VNDR_STATUS_SEQ                 | DWR_VNDR_STATUS                                  |
| VRTY_SEQ                        | DWR_VRTY   |
| WKDAY_SEQ                       | DWR_WKDAY  |
| WK_TODATE_TRANS_SEQ             | DWR_WK_TODATE_TRANS                              |

**Table 3–3 (Cont.) Database Sequences**

| Sequence Name   | Generates the Physical Key for This Table |
|-----------------|---|
| WK_TRANS_SEQ    | DWR_WK_TRANS                              |
| WRKSTN_DISP_SEQ | DWR_WRKSTN_DISP                           |
| YR_TRANS_SEQ    | DWR_YR_TRANS                              |

## Base Tables

The Base tables are listed in [Table 3–4](#).

**Table 3–4 Base Table Names, Descriptions, and Notes**

| Table Name                    | Description  | Notes  |
|-------------------------------|--|--|
| DWB_CERTIFICATE_ESCHTD_DAY    | Certificate Escheated Day                                      | The date and count of escheated vouchers. When a voucher escheats, the retailer releases all liability of the voucher to the appropriate governmental authority. The quantity of escheated vouchers and the dates on which they escheated are captured on this table. Vouchers escheat on set days through the year, typically only a few times a year.  |
| DWB_CERTIFICATE_LI            | Certificate Line Item Sub Type Of Retail Transaction Line Item | A detail line item of a Retail Transaction that records the business conducted between the retail store and another party involving the exchange in ownership, accountability, or both for merchandise, tender, or both or involving the exchange of tender for services. A type of RETAIL TRANSACTION LINE ITEM that records the sale of redeemable form of tender for a predetermined monetary value of sellable merchandise in the store. Creates a liability for the retailer in the amount denoted on the face value of the certificate |
| DWB_CUST_ORDR                 | Customer Order   | Captures information about Orders placed by customers  |
| DWB_CUST_ORDR_LI              | Customer Order Line Item                                       | Holds customer order line information. This table only holds customer order lines that have been fully shipped or canceled. This table is only used for Extract, Transform, and Load (ETL) processing. Views are built from this table for analytical reporting.   |
| DWB_CUST_ORDR_LI_STATE_ASSIGN | Customer Order Line Item State Assign                          | Record of a customer order line item being in a particular state for a period.   |
| DWB_CUST_ORDR_STATE           | Customer Order State   | Record of a customer order line item being in a particular state for a period  |
| DWB_CUST_SRVC_RQST            | Customer Service Request                                       | Holds activity request transactions at the individual activity request, day, and minute level.   |
| DWB_DAY_ACT_CONDITION         | Day Actual Conditions  | Various conditions like weather, internal, external affecting a day.   |

**Table 3–4 (Cont.) Base Table Names, Descriptions, and Notes**

| <b>Table Name</b>          | <b>Description</b>  | <b>Notes</b>   |
|----------------------------|---|--|
| DWB_DEAL                   | Deal  | A deal refers to a special offer from a supplier to the store. The deal generally provides allowances, discounts, special favorable terms of payment or other incentives to motivate the store to buy more products or services from a supplier.   |
| DWB_DEAL_VNDR_ITEM_ASGNMNT | Deal Vendor Item  | Identifies a specific VENDOR ITEM that is offered as part of a deal to the store and defines how the deal cost is to be handled.   |
| DWB_DISC_LI                | Discount Line Item<br>SubType of Retail<br>Transaction Line Item  | A detail line item of a Retail Transaction that records the business conducted between the retail store and another party involving the exchange in ownership, accountability, or both for merchandise, tender, or both, involving the exchange of tender for services. A special kind of retail line item set up to record and keep track of discounts taken in a transaction   |
| DWB_EMP_LBR                | Employee Labor  | Contains information, like days of attendance, leave taken, and other information regarding Employees  |
| DWB_EXCHNG_RATE_CRNCY_DAY  | Exchange Rate Currency<br>Rate  | Holds exchange rates for particular currencies in different locations  |
| DWB_INV_CNTRL_DOC          | Return And Transfer<br>In Out Document<br>Packing Slip<br>ReturnAuthorization<br>Request Receiving<br>Document<br>INVENTORY<br>CONTROL<br>TRANSACTION | <p>A type of INVENTORY CONTROL DOCUMENT that is completed during Return item to the Supplier or Transfer item without any Purchase Order within a difference.</p> <p>Store A document that identifies the merchandise items a supplier claims to be shipping to the store against one or more purchase orders.</p> <p>A type of INVENTORY CONTROL DOCUMENT that makes a request to a supplier to grant permission to return merchandise that is received and found to be unsuitable for sale or other use at the store</p> <p>A type of INVENTORY CONTROL DOCUMENT that is used by a store to record its acceptance of items shipped to it by a supplier against an ORDER and the SUPPLIERS packing slip.</p> <p>A type of Transaction that records Inventory Control functions being performed.</p> |
| DWB_INV_CNTRL_DOC_LI       | INVENTORY<br>CONTROL<br>TRANSACTION<br>DETAIL   | A type of Transaction that records Inventory Control detail being performed.   |
| DWB_INV_ITEM_STATE         | Inventory Item State  | A unit record of a particular Stock Item, held in a particular Inventory Location, in a particular Inventory State and controlled or managed by a particular Revenue Center  |

**Table 3–4 (Cont.) Base Table Names, Descriptions, and Notes**

| <b>Table Name</b>            | <b>Description</b>                         | <b>Notes</b>   |
|------------------------------|--|--|
| DWB_MKT_SLS_ITEM_WK          | Market Sales Item Level Week               | Contains weekly total sales detail of the market item.   |
| DWB_PCHSE_ORDR               | Purchase Order                             | Information about a Purchase Order that has been placed.   |
| DWB_PCHSE_ORDR_LI            | Purchase Order Line Item Base table        | Holds Purchase order line information. This table only holds Purchase order lines that have been fully shipped or canceled.  |
| DWB_PCHSE_ORDR_LI_STATE      | Purchase Order Line Item State             | Record of a Purchase Order line item being in a particular state for a period.   |
| DWB_PCHSE_ORDR_STATE         | Purchase Order State                       | The state of a Purchase Order Line Item during a period.   |
| DWB_PRICE_ITEM_LOC_DAY       | Price Item Location Day                    | Prices by item, location, and day. All values on this table are non-aggregatable.  |
| DWB_PRMTN_ITM                | Promotion Item                             | This entity captures the information about promotion at Item level.  |
| DWB_PRMTN_MEDIA_COST         | Promotion Media Cost                       | The cost of media for promotion.   |
| DWB_PRMTN_PRICE_DRVTN        | Promotion Price Derivation                 | Price for the specific promotion.  |
| DWB_PYMT_ON_ACCT             | Retail Transaction Line Item               | A detail line item of a Retail Transaction that records the business conducted between the retail store and another party involving the exchange in ownership, accountability, or both for merchandise, tender, or both, or involving the exchange of tender for services.   |
| DWB_RTL_SLS_RETRN_LINE_ITEM  | Sale or Return Line Item                   | Retail Transaction Line Items for sale or return of goods  |
| DWB_RTL_SL_RETRN_PRMTN_LI    | Retail Sale Return Promotion Line Item     | A detail line item of TRANSACTION that records the crediting or debiting of a CUSTOMER PROMOTIONAL ACCOUNT with points, dollars, or miles.   |
| DWB_RTL_TRX_MISC_LI          | Retail Transaction Miscellaneous Line Item | A detail line item of a RetailTransaction which records the business conducted between the retail store and another party involving the exchange in ownership or accountability for merchandise or tender or involving the exchange of tender for services. This table hosts all other retail transaction line items without a specific subentity. |
| DWB_SKU_ITEM_SLNG_PRICE      | SKU Item Selling Price                     | Selling Price related information for a SKU item at a particular business unit.  |
| DWB_SKU_ITEM_SLNG_PRICE_HIST | SKU Item Selling Price History             | The historical archive of the retail-selling unit price at which a given SKU Item was actually sold at POS, net of markdowns, markups and other price changes that modify the cumulative mark on for an SKU item.  |
| DWB_STORE_TRFC_LOC_DAY       | Store Traffic Location Day                 | Holds store traffic data. Store traffic is the number of visitors to a store on a given day.   |

**Table 3–4 (Cont.) Base Table Names, Descriptions, and Notes**

| Table Name                     | Description                               | Notes  |
|--------------------------------|---|--|
| DWB_TILL_HIST                  | Till History                              | A collection of monetary and operational totals used to track the activity volume of a till between Till Settlement Transactions. The period covered by Till History is delineated by a Till Settlement Transaction which, when initiated, sets a Till state to reconciling and, when completed, resets the state of a Till to cleared for business. |
| DWB_TILL_TAX_HIST              | Till Tax History                          | A collection of tax totals for a tax authority by till for a tender reconciliation period.   |
| DWB_TILL_TNDR_HIST             | Till Tender History                       | A collection of tender type accumulators by till tender accumulation period. This entity is used to support till tender accountability.  |
| DWB_TNDR_CHNG_LI               | Tender Change Line Item                   | Holds details of tender change in a transaction.   |
| DWB_VNDR_SKU_COST_PRFT_DAY     | Cost Item Vendor Location Day             | Contains cost change information for an item, vendor, and location combination on a given day. All values in this table are non-aggregatable.  |
| DWB_SL_FRCST_ITEM_ORG_HRCHY_WK | ForeCast Item Organization Hierarchy Week | Holds sales forecast information at the Item, location, and week hierarchy level.  |
| DWB_SL_PLAN_ITEM_ORG_HRCHY_WK  | Plan Item Organization Hierarchy Week     | Plan Item Organization Hierarchy Week  |

## Derived Tables

The Derived tables are described in [Table 3–5, "Derived Table Names, Descriptions, and Notes"](#) on page 3-32.

[Table 3–6, "Source-Target Table Level Mappings for Derived Tables"](#) on page 3-34. outlines the source to target table mappings for derived tables.

The scripts that populate the derived tables are described in ["Intra-ETL Packages for Populating Derived Tables"](#) on page 5-2.

**Table 3–5 Derived Table Names, Descriptions, and Notes**

| Table Name                 | Description                                | Notes   |
|----------------------------|--|---|
| DWD_CERTIFICATE_ACTVTY_TRX | Certificate Activity Transaction Derived   | This would be populated from retail transaction line item sub type certificate for issue and retail tender line item sub type certificate tender for redemption |
| DWD_CTLG_RQST_BY_DAY       | Catalog Request By Day Derived             | Catalog request transactions at the individual catalog request and day level.   |
| DWD_CUST_EMP_RLTNSHP_DAY   | Customer Relationship Employee Day Derived | Captures information about employee and customer and loss prevention in that respect in Day level   |
| DWD_CUST_ORDR_ITEM_DAY     | Order Item Day Derived                     | Captures item and day customer order information  |
| DWD_CUST_ORDR_LI_STATE     | Customer Order Line Item State Derived     | Derived information from Customer Order Line Item State   |

**Table 3–5 (Cont.) Derived Table Names, Descriptions, and Notes**

| Table Name                | Description                                 | Notes  |
|---------------------------|---|--|
| DWD_CUST_RFMP_SCR         | Customer RFMP Value Score                   | Captures the Recency, Frequency, Monetary, Profitability Value Score of a customer   |
| DWD_CUST_SKU_SL_RETRN_DAY | Frequent Shopper                            | Holds transaction information regarding customers who are classified as frequent shoppers  |
| DWD_INV_ADJ_BY_ITEM_DAY   | Inventory Adjustment by Item Day Derived    | Holds the inventory adjustment data at the item-location-day-reason level.   |
| DWD_INV_POSN_BY_ITEM_DAY  | Inventory Position by Item Day Derived      | Contains end of day inventory levels and status for an item and location combination on a given day.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See " <a href="#">Relational Views Used When Loading the Analytic Workspace</a> " on page 3-57 . |
| DWD_INV_UNAVL_BY_ITEM_DAY | Inventory Unavailable By Item Day           | Fact containing the details of the items marked as nonsellable or unavailable at day level.  |
| DWD_POS_CNTRL             | POS TRANSACTION FLOW<br>POS Retail          | A set of time-bounded totals used to track the operational performance of a workstation primarily for workforce planning and service level planning. The time-bounded totals typically are for 5, 10 or 15 minute intervals.   |
| DWD_POS_RTL               | POS TRANSACTION FLOW<br>Pos Control         | A set of time-bounded totals used to track the operational performance of a workstation primarily for workforce planning and service level planning. The time-bounded totals typically are for 5, 10 or 15 minute intervals.   |
| DWD_POS_STORE_FINCL       | POS TRANSACTION FLOW<br>POS Store Financial | A set of time-bounded totals used to track the operational performance of a workstation primarily for workforce planning and service level planning. The time-bounded totals typically are for 5, 10 or 15 minute intervals. Information regarding financial operations at the POS   |
| DWD_POS_TNDR_FLOW         | POS Tender flow                             | A historical record of ITEM and TRANSACTION movement by pre-defined time intervals to measure WORKSTATION productivity.  |
| DWD_RTL_SL_RETRN_ITEM_DAY | Sales Returns by Item, Day, and Retail Type | Holds sales and returns information at the item, location, day and retail type level.<br><br>The <code>bia_rtl_schema</code> used by the Oracle Retail Data Model optional OLAP component defines relational views that depends on this table. See " <a href="#">Relational Views Used When Loading the Analytic Workspace</a> " on page 3-57 .                |

**Table 3–5 (Cont.) Derived Table Names, Descriptions, and Notes**

| <b>Table Name</b>         | <b>Description</b>                           | <b>Notes</b>   |
|---------------------------|--|--|
| DWD_RTV_ITEM_DAY          | Inventory Return To Vendor Item Location Day | Holds data on inventory returned to vendor or supplier at the item, location and day level.  |
| DWD_SPACE_UTLZTN_ITEM_DAY | SKU Item Space Day Derived                   | This would be updated from inventory item state; max and min would be populated from recursive selling location; allocated space is computed from the consumer package size UOM and current unit   |
| DWD_TILL                  | Tender Repository Derived Till               | Holds tender details in different repositories like Safe, Till, or External Depository. A type of TENDER REPOSITORY that is a drawer insert, operationally associated with a WORKSTATION and optionally an EMPLOYEE. It is used to keep cash and other TENDER collected through RETAIL TRANSACTIONS and used to make change. |

**Table 3–6 Source-Target Table Level Mappings for Derived Tables**

| <b>Target Table</b>        | <b>Source Table (Transaction)</b>  |
|----------------------------|--|
| DWD_CERTIFICATE_ACTVTY_TRX | DWB_CERTIFICATE_TNDR<br>DWR_CERTIFICATE  |
| DWD_CTLG_RQST_BY_DAY       | DWB_RTL_SLS_RETRN_LINE_ITEM<br>DWR_ORG_BSNS_UNIT   |
| DWD_CUST_EMP_RLTNSHP_DAY   | DWB_RTL_SLS_RETRN_LINE_ITEM  |
| DWD_CUST_ORDR_ITEM_DAY     | DWB_CUST_ORDR_LI<br>DWB_CUST_ORDR_LI_STATE_ASSIGN<br>DWR_DAY   |
| DWD_CUST_ORDR_LI_STATE     | DWB_CUST_ORDR_LI<br>DWB_CUST_ORDR_LI_STATE_ASSIGN  |
| DWD_CUST_RFMP_SCR          | DWB_RTL_SLS_RETRN_LINE_ITEM  |
| DWD_CUST_SKU_SL_RETRN_DAY  | DWB_RTL_SLS_RETRN_LINE_ITEM<br>DWB_CUST_ORDR_LI, DWR_USERS<br>DWR_CUST, DWR_CUST_RSTRCTD_INFO<br>DWR_DAY |
| DWD_INV_ADJ_BY_ITEM_DAY    | DWB_INV_ITEM_STATE<br>DWR_SKU_ITEM_SLNG_PRICE<br>DWR_SKU_ITEM, DWR_DAY                                   |
| DWD_INV_POSN_BY_ITEM_DAY   | DWB_INV_ITEM_STATE<br>DWB_INV_CNTRL_DOC_LI<br>DWB_RCVNG_DOC<br>DWB_PRICING_ITEM_LOC_DAY<br>DWR_DAY       |

**Table 3–6 (Cont.) Source-Target Table Level Mappings for Derived Tables**

| <b>Target Table</b>       | <b>Source Table (Transaction)</b>   |
|---------------------------|---|
| DWD_INV_UNAVL_BY_ITEM_DAY | DWB_INV_ITEM_STATE<br>DWR_SKU_ITEM_SLNG_PRICE,<br>DWR_SKU_ITEM, DWR_DAY             |
| DWD_POS_CNTRL             | DWB_TILL_HIST<br>DWB_RTL_TRX<br>DWB_TILL_TNDR_HIST<br>DWR_EMP                       |
| DWD_POS_RTL               | DWB_TILL_HIST<br>DWB_RTL_TRX<br>DWR_EMP   |
| DWD_POS_STORE_FINCL       | DWB_TILL_TNDR_HIST<br>DWB_TILL_HIST<br>DWB_RTL_TRX<br>DWR_EMP                       |
| DWD_POS_TNDR_FLOW         | DWB_CHECK_TNDR<br>DWB_RTL_TRX   |
| DWD_RTL_SL_RETRN_ITEM_DAY | DWB_RTL_SLS_RETRN_LINE_ITEM<br>DWB_DISC_LI<br>DWB_RTL_TRX<br>DWB_CR_DEBIT_CARD_TNDR |
| DWD_RTV_ITEM_DAY          | DWB_PCHSE_ORDR_LI<br>DWB_PCHSE_ORDR_LI_STATE<br>DWR_DAY                             |
| DWD_SPACE_UTLZTN_ITEM_DAY | DWB_RTL_SLS_RETRN_LINE_ITEM<br>DWB_DISC_LI<br>DWR_SLNG_LOC                          |

## Aggregate Tables and Relational Materialized Views

The Aggregate tables and relational materialized views are described in [Table 3–7, "Aggregate Table and Relational Materialized Views Names, Descriptions, and Notes"](#) on page 3-36..

[Table 3–8, "Source to Target Mapping for Aggregate Tables"](#) on page 3-39. outlines the source to target table mappings for aggregate tables.

The scripts for defining and populating aggregate tables and relational materialized views are described in ["Intra-ETL Scripts for Populating Aggregate Tables and Relational Materialized Views"](#) on page 5-7.

**Table 3–7 Aggregate Table and Relational Materialized Views Names, Descriptions, and Notes**

| <b>Name</b>                   | <b>Description</b>  | <b>Notes</b>  |
|-------------------------------|---|---|
| DWA_CARRIER_CMPLNC_WK_MV      | Carrier Compliance Week Aggregate Relational Materialized View              | Record of a carrier's delivery performance during a given week. Delivery performance is measured by how many times they were late, early or on-time, and how late or early they were in hours or days |
| DWA_CERTIFICATE_ACTVTY_DAY_MV | Certificate Activity Day Aggregate Relational Materialized View             | Day Aggr of Certificate Activity Transaction Derived  |
| DWA_CERTIFICATE_ACTVTY_WK_MV  | Certificate Activity Week Aggregate Relational Materialized View            | Week Aggr of Certificate Activity Transaction Derived   |
| DWA_CUST_EMP_RLTNSHP_MO_MV    | Customer Employee Relationship Month Relational Materialized View           | Captures monthly information regarding information about employee and customer and loss prevention.   |
| DWA_CUST_EMP_SL_RETRN_MO_MV   | Customer Employee Sale Return Month Aggregate Relational Materialized View  | Month Aggregation of Customer SKU Sale Return Derived   |
| DWA_CUST_EMP_SL_RETRN_WK_MV   | Customer Employee Sale Return Month Relational Materialized View            | Captures sale return transaction level at Customer, Employee and week level.  |
| DWA_CUST_ORDR_DEPT_DAY_MV     | Order Department Day Aggregate Relational Materialized View                 | Captures department and day customer order information  |
| DWA_CUST_ORDR_ITEM_MO_MV      | Order Department Month Aggregate Relational Materialized View               | Captures department and month customer order information  |
| DWA_CUST_ORDR_ITEM_WK_MV      | Order Item Week Aggregate Relational Materialized View                      | Captures item and week customer order information   |
| DWA_CUST_ORDR_SBC_DAY_MV      | Order Subclass Day Aggregate Relational Materialized View                   | Captures customer order information by subclass, day  |
| DWA_CUST_ORDR_SBC_MO_MV       | Order Subclass Month Aggregate Relational Materialized View                 | Captures customer order information by subclass, month  |
| DWA_CUST_ORDR_SBC_WK_MV       | Order Subclass Week Aggregate Relational Materialized View                  | Captures customer order information by subclass, week   |
| DWA_INV_BDGT_BY_WK            | Inventory Budget By Week Aggregate  | Holds information regarding the budgeted quantity and cost of the inventory   |
| DWA_INV_ITEM_STATE_HIST_WK_MV | Inventory Item State History Week Relational Materialized View              | Weekly historical data regarding the item state   |
| DWA_INV_POSN_BY_DEPT_DAY_MV   | Inventory Position by Department Day Aggregate Relational Materialized View | Contains end of day inventory levels and status for a department, location, and retail type combination on a given day.   |

**Table 3–7 (Cont.) Aggregate Table and Relational Materialized Views Names, Descriptions, and Notes**

| <b>Name</b>                   | <b>Description</b>   | <b>Notes</b>  |
|-------------------------------|--|---|
| DWA_INV_POSN_BY_DEPT_WK_MV    | Inventory Position by Department Week Aggregate                            | Contains end of week inventory levels and status for a department, location, and retail type combination on a given week.               |
| DWA_INV_POSN_BY_ITEM_WK_MV    | Inventory Position by Item Week Aggregate Relational Materialized View     | Contains end of day inventory levels and status for an item and location combination for a given week.                                  |
| DWA_INV_POSN_BY_SBC_DAY_MV    | Inventory Position By Subclass Day Aggregate Relational Materialized View  | Holds end of day inventory levels and status for a subclass, location, product season, and retail type combination on a given day.      |
| DWA_INV_POSN_BY_SBC_WK_MV     | Inventory Position By Subclass Week Aggregate Relational Materialized View | Contains end of week inventory levels and status for a subclass, location, product season, and retail type combination on a given week. |
| DWA_INV_RCPT_BY_ITEM_DAY_MV   | Inventory Receipt by Item Day Aggregate Relational Materialized View       | Holds inventory receipts at the Item, location and day level.   |
| DWA_INV_RCPT_BY_ITEM_WK_MV    | Inventory Receipt by Item Week Aggregate Relational Materialized View      | Holds inventory receipts at the Item, location and week level.  |
| DWA_INV_RCPT_BY_SBC_DAY_MV    | Inventory Receipt by SubClass Day Aggregate Relational Materialized View   | Holds inventory receipts at the subclass, location and day level.   |
| DWA_INV_RCPT_BY_SBC_WK_MV     | Inventory Receipt by SubClass Week Aggregate Relational Materialized View  | Holds inventory receipts at the subclass, location and week level.  |
| DWA_INV_TRNSFR_BY_ITEM_DAY_MV | Inventory Transfer By Item Day Aggregate Relational Materialized View      | Holds inventory transfers at the item, to location, from location, transfer type, and day level.  |
| DWA_INV_TRNSFR_BY_ITEM_WK_MV  | Inventory Transfer By Item Week Aggregate Relational Materialized View     | Holds inventory transfers at the item, to location, from location, transfer type, and week level.                                       |
| DWA_INV_TRNSFR_BY_SBC_DAY_MV  | Inventory Transfer By Subclass Day Aggr Relational Materialized View       | Aggregate fact containing Inventory transfer details at Subclass and Day level.   |
| DWA_MKT_SLS_DEPT_WK_MV        | Inventory Transfer By Subclass Week Aggr Relational Materialized View      | Contains weekly total sales detail of the market item (by department).  |
| DWA_PRMTN_COST_CNTRBTN_WK     | Promotion Cost Contribution  | Contribution of items in promotion  |
| DWA_PRMTN_SLS_MRGN_WK         | Promotion Sales margin Week Aggr   | Information regarding sales and margin of items in promotion  |

**Table 3–7 (Cont.) Aggregate Table and Relational Materialized Views Names, Descriptions, and Notes**

| <b>Name</b>                    | <b>Description</b>  | <b>Notes</b>  |
|--------------------------------|---|---|
| DWA_RTL_MRKDN_DEPT_DAY_MV      | Retail Markdown Department Day Aggregate Materialized View          | Holds department markdown details at day level.   |
| DWA_RTL_MRKDN_DEPT_WK_MV       | Retail Markdown Department Week Aggregate Materialized View         | Holds department markdown details at week level.  |
| DWA_RTL_MRKDN_ITEM_DAY_MV      | Retail Markdown Item Day Aggregate Materialized View                | Holds item markdown details at day level.   |
| DWA_RTL_SL_RETRN_DEPT_DAY_MV   | Retail Sale Return Department Day Aggr Materialized View            | Holds sales and returns information at the department, location, day, and retail type level.  |
| DWA_RTL_SL_RETRN_DEPT_WK_MV    | Retail Sale Return Department Day Aggr Materialized View            | Holds sales and returns information at the department, location, week, and retail type level.   |
| DWA_RTL_SL_RETRN_ITEM_MO_MV    | Retail Sale Return Item Month Aggregate Materialized View           | Holds sales and returns information at the item, location, month and retail type level.   |
| DWA_RTL_SL_RETRN_ITEM_WK_MV    | Retail Sale Return Item Week Aggregate Materialized View            | Holds sales and returns information at the item, location, week and retail type level.  |
| DWA_RTL_SL_RETRN_ORG_HRCHY_DAY | Retail Sale Return Organization Hierarchy Day table                 | Holds information regarding item sale and return (by day).  |
| DWA_RTL_SL_RETRN_SBC_DAY_MV    | Retail Sale Return Subclass Day Aggregate Materialized View         | Holds sales and returns information at the subclass, location, day and retail type level.   |
| DWA_RTL_SL_RETRN_SBC_MO_MV     | Retail Sale Return Subclass Month Aggregate Materialized View       | Holds sales and returns information at the subclass, location, month and retail type level.   |
| DWA_RTL_SL_RETRN_SBC_WK_MV     | Retail Sale Return Subclass Week Aggregate Materialized View        | Holds sales and returns information at the subclass, location, week and retail type level.  |
| DWA_RTL_SL_RT_ORG_HRCHY_DAY_MV | Retail Sale Return Organization Hierarchy Day Materialized View     | Holds information regarding item sale and return (by day).  |
| DWA_RTL_TRX_EMP_WRKSTN_MV      | Retail Transaction Employee Workstation Aggregate Materialized View | Records the Employee and the workstation involved in serving the customer purchasing the merchandise or services identified in the Retail Transaction.  |
| DWA_SPACE_UTLZTN_DEPT_DAY_MV   | Space Allocation Department Loc Day Materialized View               | Holds the information about the amount of space allocated for each department at a particular location. The space is measured in one, two or three dimensional space (linear, square, cubic). |
| DWA_STCK_LDGR_BY_SBC_MO        | Inventory Value Subclass Location Month                             | Contains the inventory values such as Beginning and Ending Stock on Hand, Cost amounts, or Markdown Values at Subclass, Location, and Month Level.  |

**Table 3–7 (Cont.) Aggregate Table and Relational Materialized Views Names, Descriptions, and Notes**

| <b>Name</b>                | <b>Description</b>  | <b>Notes</b>   |
|----------------------------|---|--|
| DWA_STCK_LDGR_BY_SBC_WK    | Inventory Value Subclass Location Week                              | Contains the inventory values such as Beginning and Ending Stock on Hand, Cost amounts, or Markdown Values at Subclass, Location, and Week Level.    |
| DWA_TILL_HIST_WRKSTN_MV    | Till History Workstation Aggregate Relational Materialized View     | Holds till history for workstation.  |
| DWA_TILL_TNDR_HIST_EMP_MV  | Till Tender History Employee Aggregate Relational Materialized View | A collection of tender type accumulators by till tender accumulation period and employee. This entity is used to support till tender accountability. |
| DWA_VNDR_AVLBLTY_ITEM_DAY  | Vendor Availability Item Day Aggr                                   | Objective of this entity is to support Reports. Table data is populated from Purchase Order  |
| DWA_VNDR_CMPLNC_ITEM_WK_MV | Relational Materialized View  | Holds timeliness, quantity and quality control supplier compliance information at the item-location-week-shipment-po level.                          |
| DWA_VNDR_CMPLNC_WK_MV      | Relational Materialized View  | Holds timeliness, quantity and quality control supplier compliance information at the location-week-shipment-po level.                               |
| DWA_VNDR_CNTRCT_ITEM_DAY   | Vendor Contract Item Day Aggr                                       | Objective of this entity is to support Reports Table data is populated from Purchase Order   |

**Table 3–8 Source to Target Mapping for Aggregate Tables**

| <b>Target Table Name</b>  | <b>Source Table Names</b>                  |
|---------------------------|--|
| DWA_CUST_EMP_SL_RETRN_WK  | DWD_CUST_SKU_SL_RETRN_DAY<br>DWR_DAY       |
| DWA_CUST_ORDR_ITEM_WK     | DWD_CUST_ORDR_ITEM_DAY<br>DWR_DAY          |
| DWA_CUST_ORDR_SBC_DAY     | DWD_CUST_ORDR_ITEM_DAY<br>DWR_SKU_ITEM     |
| DWA_INV_RCPT_BY_ITEM_WK   | DWA_INV_RCPT_BY_ITEM_DAY<br>DWR_DAY        |
| DWA_INV_RCPT_BY_SBC_DAY   | DWA_INV_RCPT_BY_ITEM_DAY<br>DWR_SKU_ITEM   |
| DWA_INV_TRNSFR_BY_ITEM_WK | DWA_INV_TRNSFR_BY_ITEM_DAY<br>DWR_DAY      |
| DWA_INV_TRNSFR_BY_SBC_DAY | DWA_INV_TRNSFR_BY_ITEM_DAY<br>DWR_SKU_ITEM |
| DWA_RTL_MRKDN_ITEM_DAY    | DWD_RTL_SL_RETRN_ITEM_DAY                  |
| DWA_RTL_SL_RETRN_ITEM_WK  | DWD_RTL_SL_RETRN_ITEM_DAY<br>DWR_DAY       |

**Table 3–8 (Cont.) Source to Target Mapping for Aggregate Tables**

| <b>Target Table Name</b>   | <b>Source Table Names</b>  |
|----------------------------|--|
| DWA_RTL_SL_RETRN_SBC_DAY   | DWD_RTL_SL_RETRN_ITEM_DAY<br>DWR_SKU_ITEM  |
| DWA_RTL_TRX_EMP_WRKSTN     | DWB_TILL_HIST<br>DWR_DAY<br>DWB_TILL_TNDR_HIST<br>DWD_POS_CNTRL<br>DWD_POS_RTL                                     |
| DWA_SPACE_UTLZTN_DEPT_DAY  | DWD_SPACE_UTLZTN_ITEM_DAY<br>DWR_SKU_ITEM<br>DWR_SEASON  |
| DWA_TILL_HIST_WRKSTN       | DWB_TILL_HIST<br>DWV_TIME_DAY<br>DWR_EMP   |
| DWA_TILL_TNDR_HIST_EMP     | DWB_TILL_TNDR_HIST<br>DWR_EMP<br>DWR_USERS   |
| DWA_INV_POSN_BY_ITEM_WK    | DWD_INV_POSN_BY_ITEM_DAY<br>DWR_DAY  |
| DWA_INV_POSN_BY_SBC_DAY    | DWD_INV_POSN_BY_ITEM_DAY<br>DWR_SKU_ITEM   |
| DWA_CERTIFICATE_ACTVTY_DAY | DWD_CERTIFICATE_ACTVTY_TRX   |
| DWA_CARRIER_CMPLNC_WK      | DWB_INV_CNTRL_DOC<br>DWB_INV_CNTRL_DOC_LI<br>DWR_DAY   |
| DWA_CUST_EMP_RLTNSHP_MO    | DWD_CUST_EMP_RLTNSHP_DAY<br>DWR_DAY<br>DWR_CUST  |
| DWA_INV_ITEM_STATE_HIST_WK | DWB_INV_ITEM_STATE<br>DWR_DAY  |
| DWA_INV_RCPT_BY_ITEM_DAY   | DWB_INV_CNTRL_DOC_LI<br>DWB_INV_CNTRL_DOC<br>DWR_SKU_ITEM_SLNG_PRICE<br>DWR_SKU_ITEM<br>DWR_DAY<br>DWR_ITEM_SEASON |

**Table 3–8 (Cont.) Source to Target Mapping for Aggregate Tables**

| <b>Target Table Name</b>       | <b>Source Table Names</b>  |
|--------------------------------|--|
| DWA_INV_TRNSFR_BY_ITEM_DAY     | DWB_INV_CNTRL_DOC<br>DWB_INV_CNTRL_DOC_LI<br>DWR_DAY<br>DWR_SKU_ITEM_SLNG_PRICE<br>DWR_SKU_ITEM<br>DWR_ITEM_SEASON |
| DWA_CUST_EMP_SL_RETRN_MO       | DWD_CUST_SKU_SL_RETRN_DAY<br>DWR_DAY<br>DWR_BSNS_WK  |
| DWA_CUST_ORDR_DEPT_DAY         | DWD_CUST_ORDR_ITEM_DAY<br>DWR_SKU_ITEM<br>DWR_ITEM_SBC   |
| DWA_CUST_ORDR_ITEM_MO          | DWD_CUST_ORDR_ITEM_DAY<br>DWR_DAY<br>DWR_BSNS_WK   |
| DWA_CUST_ORDR_SBC_WK           | DWD_CUST_ORDR_ITEM_DAY<br>DWR_SKU_ITEM<br>DWR_DAY  |
| DWA_INV_RCPT_BY_SBC_WK         | DWA_INV_RCPT_BY_ITEM_DAY,<br>DWR_SKU_ITEM,DWR_DAY  |
| DWA_INV_TRNSFR_BY_SBC_WK       | DWA_INV_TRNSFR_BY_ITEM_DAY,<br>DWR_SKU_ITEM, DWR_DAY   |
| DWA_RTL_MRKDN_DEPT_DAY         | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_SKU_ITEM   |
| DWA_RTL_MRKDN_ITEM_WK          | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWV_TIME_DAY   |
| DWA_RTL_SL_RETRN_DEPT_DAY      | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_SKU_ITEM,DWR_ITEM_SBC  |
| DWA_RTL_SL_RETRN_ITEM_MO       | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_DAY, DWR_BSNS_WK   |
| DWA_RTL_SL_RETRN_SBC_WK        | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_DAY, DWR_SKU_ITEM  |
| DWA_INV_POSN_BY_SBC_WK         | DWD_INV_POSN_BY_ITEM_DAY,<br>DWR_SKU_ITEM,DWR_DAY  |
| DWA_INV_POSN_BY_DEPT_DAY       | DWD_INV_POSN_BY_ITEM_DAY,<br>DWR_SKU_ITEM  |
| DWA_RTL_SL_RETRN_ORG_HRCHY_DAY | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_SKU_ITEM, DWR_ITEM_SBC   |
| DWA_RTL_MRKDN_DEPT_WK          | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_SKU_ITEM,DWR_DAY   |

**Table 3–8 (Cont.) Source to Target Mapping for Aggregate Tables**

| <b>Target Table Name</b>  | <b>Source Table Names</b>  |
|---------------------------|--|
| DWA_RTL_SL_RETRN_DEPT_WK  | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_SKU_ITEM, DWR_ITEM_SBC,<br>DWR_DAY             |
| DWA_RTL_SL_RETRN_SBC_MO   | DWD_RTL_SL_RETRN_ITEM_DAY,<br>DWR_DAY, DWR_BSNS_WK<br>DWR_SKU_ITEM               |
| DWA_CUST_ORDR_SBC_MO      | DWD_CUST_ORDR_ITEM_DAY<br>DWR_SKU_ITEM<br>DWR_DAY<br>DWR_BSNS_WK                 |
| DWA_INV_POSN_BY_DEPT_WK   | DWD_INV_POSN_BY_ITEM_DAY<br>DWR_SKU_ITEM<br>DWR_ITEM_SBC<br>DWR_DAY              |
| DWA_CERTIFICATE_ACTVTY_WK | DWD_CERTIFICATE_ACTVTY_TRX<br>DWR_DAY  |
| DWA_CUST_ORDR_DEPT_MO     | DWD_CUST_ORDR_ITEM_DAY<br>DWR_SKU_ITEM<br>DWR_DAY<br>DWR_BSNS_WK<br>DWR_ITEM_SBC |
| DWA_MKT_SLS_DEPT_WK       | DWB_MKT_SLS_ITEM_WK<br>DWR_ITEM_MKT_DATA   |

## Physical Data Model of the Data Mining Component

When you have the Data Mining component of Oracle Retail Data Model installed, Oracle Retail Data Model creates data mining models. The physical model of the Oracle Retail Data Model Data Mining component is defined `bia_rtl_mining` schema. The definitions in that schema include definitions for tables and views.

### Tables defined in the `bia_rtl_mining` schema

The definitions in the schema include definitions for tables that have name ending in "\_SRC" (for example, `ASSOCIATE_LOSS_SRC` and `CUST_CATEGORY_MIX_SRC`). These tables contain source input data for the data mining models.

### Views defined in the `bia_rtl_mining` schema

After you create the mining models, the following database views are created that hold the information used for accessing the mining rules and signatures for each data mining model:

- For the models corresponding to type ABN and DT, Oracle Retail Data Model has two views. One view corresponds to the Model Signature. The other view corresponds to the Model Rules. These target views are defined based on two tables: `RBIW_DM_MODEL_SIGN` and `RBIW_DM_RULES`.

- For the models corresponding to type APASS, Oracle Retail Data Model has a single view corresponding to the Model Rules (Association details) with additional attributes which serve to qualify the Rule (Category Basket). These views are based on the table: RBIW\_DM\_APASS\_RULES.

Target views are selections on a generic model rules table based on a particular model. There is one target view for each model. Within the target view, the performance measure column contains the name or entry for the target variable used by the model.

The models for each type of analysis and the corresponding views containing the model rules are outlined in [Table 3–9, "Data Mining Model and Views Containing Model Rules"](#).

**Table 3–9 Data Mining Model and Views Containing Model Rules**

| Data Mining Model (Analysis)                 | Model Type | View Containing Model Rules   |
|--|------------|-------------------------------|
| Associate Basket Analysis Model              | ABN, DT    | ASSOCIATE_BASKET_RULES        |
| Associate Loss Analysis Model                | ABN, DT    | ASSOCIATE_LOSS_RULES          |
| Associate Sales Analysis Model               | ABN, DT    | ASSOCIATE_SALES_RULES         |
| Customer Category Mix Analysis Model         | ABN, DT    | CUST_CATEGORY_MIX_RULES       |
| Customer Category Mix Analysis Model         | APASS      | CUST_CATEGORY_MIX_APASS_RULES |
| Customer Loyalty Analysis Model              | ABN, DT    | CUSTOMER_LOYALTY_RULES        |
| Frequent Shopper Category Mix Analysis Model | ABN,DT     | FS_CATEGORY_MIX_RULES         |
| Frequent Shopper Category Mix Analysis Model | APASS      | FS_CATEGORY_MIX_APASS_RULES   |
| Item Basket Analysis Model                   | ABN, DT    | ITEM_BASKET_RULES             |
| Item POS Loss Analysis Model                 | ABN, DT    | ITEM_POS_LOSS_RULES           |
| POS Flow Analysis Model                      | ABN, DT    | POS_FLOW_RULES                |
| Store Loss Analysis Model                    | ABN, DT    | STORE_LOSS_RULES              |

## Physical Data Model of the OLAP Component

When you have the OLAP component of Oracle Retail Data Model installed, your Oracle Retail Data Model data warehouse includes OLAP multidimensional cubes that support OLAP analysis and forecasting

The physical model of the Oracle Retail Data Model OLAP component is defined by the `bia_rtl_olap` schema. The definitions in that schema include definitions for:

- [Analytic Workspaces Used by the OLAP Component](#)
- [OLAP Data Model in Oracle Retail Data Model](#)
- [Relational Views Used for the OLAP Component](#)

### Analytic Workspaces Used by the OLAP Component

An analytic workspace is a container for storing related OLAP cubes. Analytic workspaces are stored in tables in the Oracle database. The names of these tables always begin with AW\$.

The analytic workspaces used in the Oracle Retail Data Model OLAP environment vary depending on whether you are working with Oracle Database 10g or Oracle Database 11g:

- [Analytic Workspaces for Oracle Retail Data Model with Oracle Database 10g](#)
- [Analytic Workspaces for Oracle Retail Data Model with Oracle Database 11g](#)

### **Analytic Workspaces for Oracle Retail Data Model with Oracle Database 10g**

The Oracle Retail Data Model OLAP environment for Oracle Database 10g Release 2 is managed through two analytic workspaces:

- **ESLSINV:** Inactive analytic workspace (Repository or Backup)  
ESLSINV is the structural analytic workspace without any data loaded in it.
- **PSLSINV:** Active analytic workspace (Production)  
PSLSINV is the active analytic workspace with the data loaded in it. OLAP Reporting occurs off this analytic workspace.

### **Analytic Workspaces for Oracle Retail Data Model with Oracle Database 11g**

OLAP metadata in Oracle 11g Release 1 does not support the use of multiple analytic workspaces with the same structure or OLAP model to exist in the same schema. Consequently, the Oracle Retail Data Model OLAP environment for Oracle Database 11g Release 1 is managed through a single analytic workspace:

- **PSLSINV:** Active analytic workspace (Production).  
PSLSINV is the active analytic workspace with the data loaded in it. OLAP Reporting occurs off this analytic workspace.

## **OLAP Data Model in Oracle Retail Data Model**

The dimensional data model is an integral part of On-Line Analytical Processing, or OLAP. A dimensional data model is as much a logical model as a physical model. Conceptually, a dimensional data model is composed of cubes, measures, dimensions, hierarchies, levels, and attributes.

**See also:** For a more complete introduction to dimensional data models, see "Overview of the Dimensional Data Model" in *Oracle OLAP User's Guide*.

This section introduces the multi-dimensional OLAP data model delivered with Oracle Retail Data Model:

- [OLAP Dimensions in Oracle Retail Data Model](#)
- [OLAP Cubes and Measures in Oracle Retail Data Model](#)

To see all of the OLAP objects delivered with Oracle Retail Data Model, view the Oracle Retail Data Model analytic workspaces in the Analytic Workspace Manager.

**See also:** For information on using the Analytic Workspace Manager, see "Getting Started with Analytic Workspace Manager" in *Oracle OLAP User's Guide*.

### **OLAP Dimensions in Oracle Retail Data Model**

There are three dimensions:

- Organization
- Product
- Time

**Tip:** Changed or new dimensions are not supported by Oracle Retail Data Model. Consequently, do not change the dimensions that are defined and delivered with Oracle Retail Data Model, but, instead, define new ones.

**Organization** The organization dimension has three hierarchies:

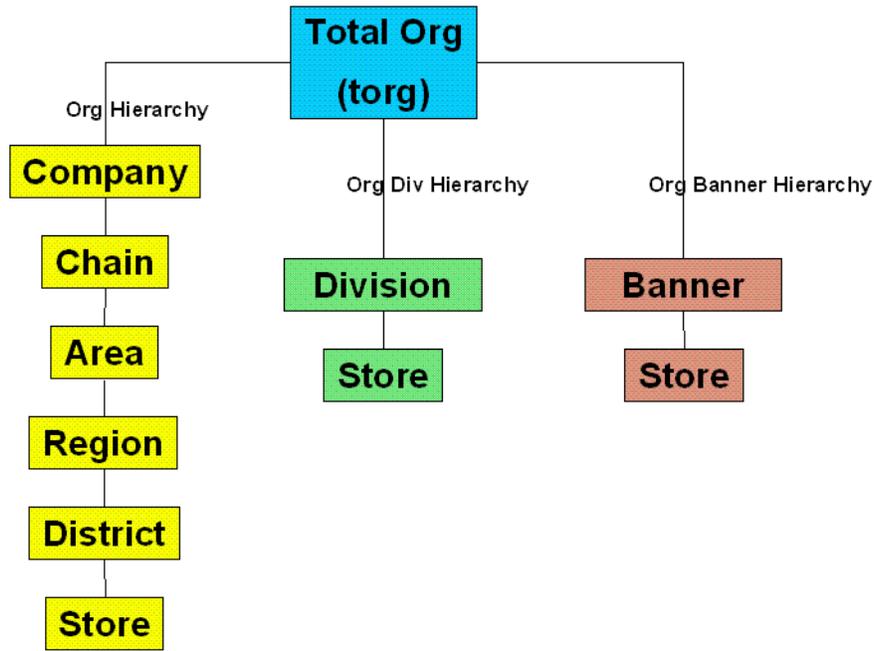
- Organization
- Organization Division
- Organization Banner

Table 3–10, "Organization Dimension" lists the levels in the organization dimension.

**Table 3–10 Organization Dimension**

| S. No. | LEVEL                     | Organization Hierarchy (HORG) | Organization Division Hierarchy (HDIVISION) | Organization Banner Hierarchy (HBANNER) |
|--------|---------------------------|-------------------------------|---|---|
| 1.     | TORG (Total Organization) | TORG                          | TORG  | TORG                                    |
| 2.     | BANNER (Banner)           |                               |   | BANNER                                  |
| 3.     | DIVISION (Division)       |                               | DIVISION                                    |   |
| 4.     | COMPANY (Company)         | COMPANY                       |   |   |
| 5.     | CHAIN (Chain)             | CHAIN                         |   |   |
| 6.     | AREA (Area)               | AREA                          |   |   |
| 7.     | REGION (Region)           | REGION                        |   |   |
| 8.     | DISTRICT (District)       | DISTRICT                      |   |   |
| 9.     | STORE (Store)             | STORE                         | STORE                                       | STORE                                   |

**Figure 3–1 Organization Dimension**



**Product** The product dimension has two hierarchies:

- Product
- Product Cluster

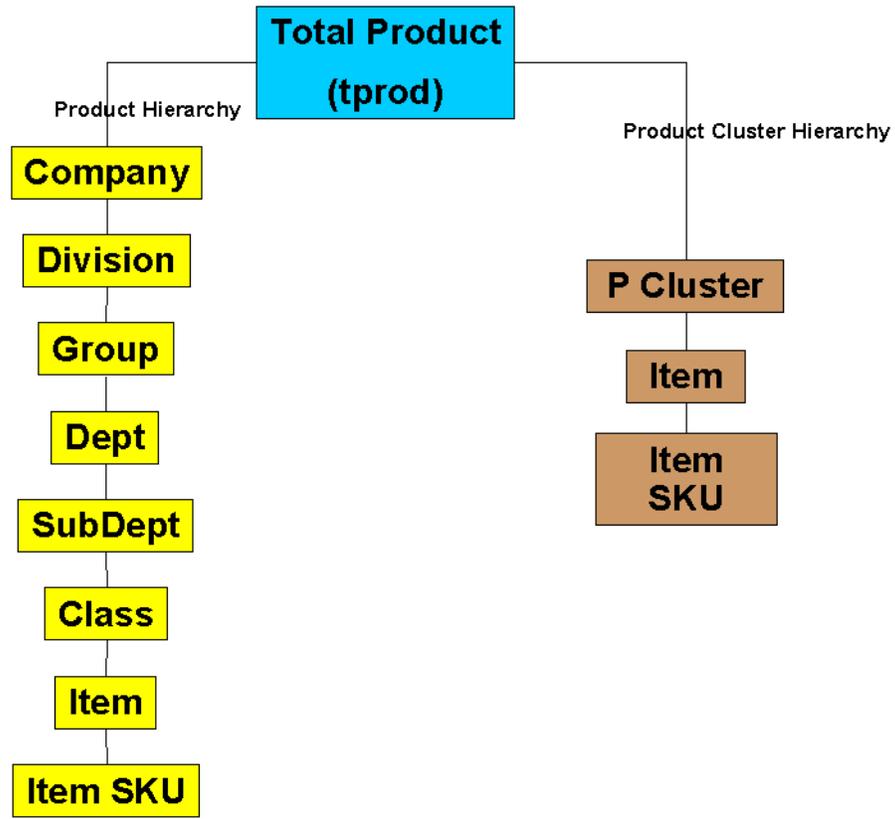
Table 3–11, "Product Dimension" lists the levels in the organization dimension.

**Table 3–11 Product Dimension**

| S. No. | LEVEL                      | Product Hierarchy (HPROD) | Product Cluster Hierarchy (HPCLUSTER) |
|--------|----------------------------|---------------------------|---------------------------------------|
| 1.     | TPROD (Total Product)      | TPROD                     | TPROD                                 |
| 2.     | PCLUSTER (Product Cluster) |                           | PCLUSTER                              |
| 3.     | COMPANY (Company)          | COMPANY                   |                                       |
| 4.     | DIVISION (Division)        | DIVISION                  |                                       |
| 5.     | GROUP <sup>1</sup> (Group) | GROUP                     |                                       |
| 6.     | DEPT (Department)          | DEPT                      |                                       |
| 7.     | CLASS (Class)              | CLASS                     |                                       |
| 8.     | SUBCLASS (Sub Class)       | SUBCLASS                  |                                       |
| 9.     | ITEM (Item)                | ITEM                      | ITEM                                  |
| 10.    | SKU (SKU Item)             | SKU                       | SKU                                   |

<sup>1</sup> For Oracle Retail Data Model for OLAP 11g, this level is named GROUP. However, since GROUP is a restricted keyword for Oracle OLAP 11g metadata, in Oracle Retail Data Model for OLAP 11g, this level has been renamed to GROUP1. The Level Description continues to be Group in both versions.

Figure 3–2 Product Dimension



**Time** The time dimension has three hierarchies.

- Time Business
- Time Calendar
- Time Calendar Week

Table 3–12, "Time Dimension" lists the levels in the organization dimension.

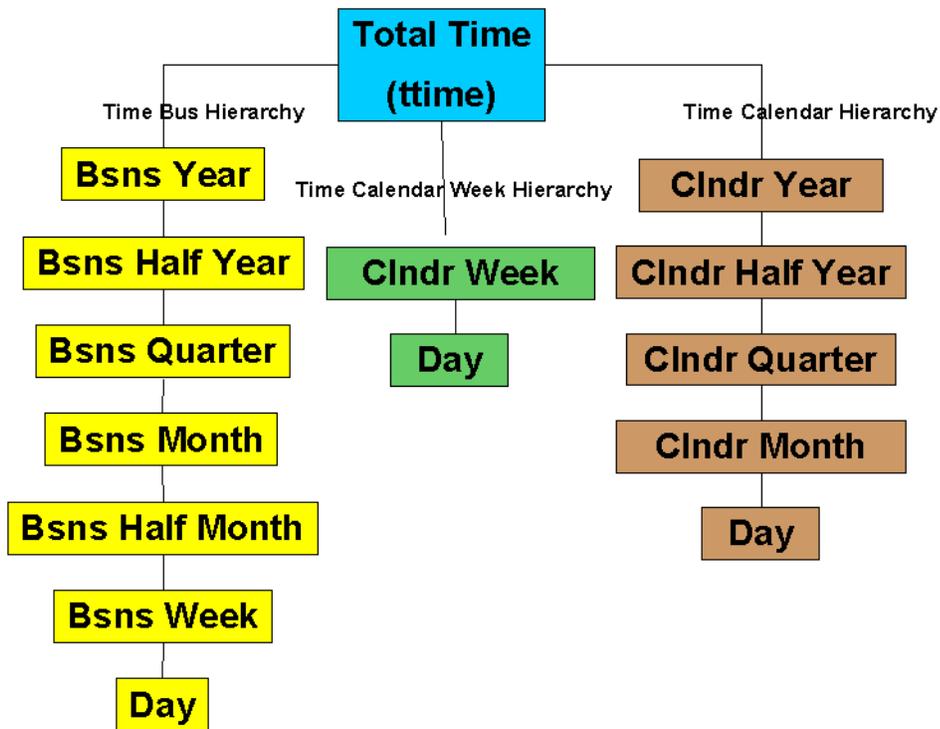
Table 3–12 Time Dimension

| S. No. | LEVEL                              | Time Business Hierarchy (HTBSNS) | Time Calendar Hierarchy (HTCLNDR) | Time Calendar Week Hierarchy (HTCLNDRWK) |
|--------|------------------------------------|----------------------------------|-----------------------------------|--|
| 1.     | TTIME (Total Time)                 | TTIME                            | TTIME                             | TTIME                                    |
| 2.     | CLNDR_YR (Calendar Year)           |                                  | CLNDR_YR                          |  |
| 3.     | CLNDR_HLF_YR (Calendar Half Year)  |                                  | CLNDR_HLF_YR                      |  |
| 4.     | CLNDR_QTR (Calendar Quarter)       |                                  | CLNDR_QTR                         |  |
| 5.     | CLNDR_MO (Calendar Month)          |                                  | CLNDR_MO                          |  |
| 6.     | CLNDR_HLF_MO (Calendar Half Month) |                                  | CLNDR_HLF_MO                      |  |
| 7.     | CLNDR_WK (Calendar Week)           |                                  |                                   | CLNDR_WK                                 |
| 8.     | BSNS_YR (Business Year)            | BSNS_YR                          |                                   |  |

**Table 3–12 (Cont.) Time Dimension**

| S. No. | LEVEL                             | Time Business Hierarchy (HTBSNS) | Time Calendar Hierarchy (HTCLNDR) | Time Calendar Week Hierarchy (HTCLNDRWK) |
|--------|-----------------------------------|----------------------------------|-----------------------------------|--|
| 9.     | BSNS_HLF_YR (Business Half Year)  | BSNS_HLF_YR                      |                                   |  |
| 10.    | BSNS_QTR (Business Quarter)       | BSNS_QTR                         |                                   |  |
| 11.    | BSNS_MO (Business Month)          | BSNS_MO                          |                                   |  |
| 12.    | BSNS_HLF_MO (Business Half Month) | BSNS_HLF_MO                      |                                   |  |
| 13.    | BSNS_WK (Business Week)           | BSNS_WK                          |                                   |  |
| 14.    | DAY (Day)                         | DAY                              | DAY                               | DAY                                      |

**Figure 3–3 Time Dimension**



**OLAP Cubes and Measures in Oracle Retail Data Model**

There are four OLAP cubes that store measures. These are the:

- Sales Cube
- Sales Forecast Cube
- Inventory Cube
- Inventory Forecast Cube

**Sales Cube** The Sales cube, named OOS\_SALES, contains 4 stored measure and 52 calculated measures.

Table 3–13, "Measures in the Sales Cube" describes the measures that are in the OOS\_SALES cube.

**Table 3–13 Measures in the Sales Cube**

| Measure Name               | Measure Description                    | Measure Type | Data Type |
|----------------------------|--|--------------|-----------|
| S_VALUE                    | Sales Value                            | CALCULATED   | DECIMAL   |
| S_VALUE_YTD                | Sales Value YTD                        | CALCULATED   | NUMBER    |
| S_VALUE_YTD_LY             | Sales Value YTD Last Year              | CALCULATED   | DECIMAL   |
| S_VALUE_YTD_LY_PCT_CHG     | Sales Value YTD % Chg Last Year        | CALCULATED   | DECIMAL   |
| S_VALUE_YTD_LY_CHG         | Sales Value YTD Chg Last Year          | CALCULATED   | DECIMAL   |
| S_VALUE_RANK_U             | Sales Value Rank Unique                | CALCULATED   | INTEGER   |
| S_VALUE_RANK_NU            | Sales Value Rank Non-Unique            | CALCULATED   | INTEGER   |
| S_VALUE_PROD_SHR_TOT       | Sales Value Share of Total Prod        | CALCULATED   | DECIMAL   |
| S_VALUE_PROD_SHR_PRNT      | Sales Value Share of Prod Parent       | CALCULATED   | NUMBER    |
| S_VALUE_PROD_SHR_DEPT      | Sales Value Share of Prod Dept         | CALCULATED   | NUMBER    |
| S_VALUE_ORG_TIME_RANK_UNAL | Sales Value Org Time Rank Unique       | CALCULATED   | INTEGER   |
| S_VALUE_ORG_SHR_TOT        | Sales Value Share of Total Org         | CALCULATED   | DECIMAL   |
| S_VALUE_ORG_SHR_PRNT       | Sales Value Share of Org Parent        | CALCULATED   | NUMBER    |
| S_VALUE_ORG_SHR_AREA       | Sales Value Share of Org Area Ancestor | CALCULATED   | NUMBER    |
| S_VALUE_ORG_RANK_U         | Sales Value Org Rank Unique            | CALCULATED   | INTEGER   |
| S_VALUE_ORG_RANK_UNAL      | Sales Value Org Rank Unique NALAST     | CALCULATED   | INTEGER   |
| S_VALUE_ORG_RANK_UNAF      | Sales Value Org Rank Unique NAFIRST    | CALCULATED   | INTEGER   |
| S_VALUE_LY                 | Sales Value Last Year                  | CALCULATED   | DECIMAL   |
| S_VALUE_LY_PCT_CHG         | Sales Value % Chg Last Year            | CALCULATED   | DECIMAL   |
| S_VALUE_LY_CHG             | Sales Value Change Last Year           | CALCULATED   | DECIMAL   |
| S_VALUE_LP                 | Sales Value Last Period                | CALCULATED   | DECIMAL   |
| S_VALUE_LP_PCT_CHG         | Sales Value % Chg Last Period          | CALCULATED   | DECIMAL   |
| S_VALUE_LP_CHG             | Sales Value Change Last Period         | CALCULATED   | DECIMAL   |
| S_UNITS                    | Sales Units                            | CALCULATED   | INTEGER   |
| S_UNITS_YTD                | Sales Units YTD                        | CALCULATED   | NUMBER    |
| S_UNITS_YTD_LY             | Sales Units YTD Last Year              | CALCULATED   | INTEGER   |
| S_UNITS_YTD_LY_PCT_CHG     | Sales Units YTD % Chg Last Year        | CALCULATED   | DECIMAL   |
| S_UNITS_YTD_LY_CHG         | Sales Units YTD Chg Last Year          | CALCULATED   | INTEGER   |
| S_UNITS_RANK_U             | Sales Units Rank Unique                | CALCULATED   | INTEGER   |
| S_UNITS_RANK_NU            | Sales Units Rank Non-Unique            | CALCULATED   | INTEGER   |
| S_UNITS_PROD_SHR_TOT       | Sales Units Share of Total Prod        | CALCULATED   | DECIMAL   |
| S_UNITS_PROD_SHR_PRNT      | Sales Units Share of Prod Parent       | CALCULATED   | NUMBER    |
| S_UNITS_PROD_SHR_DEPT      | Sales Units Share of Prod Dept         | CALCULATED   | NUMBER    |
| S_UNITS_ORG_TIME_RANK_UNAL | Sales Units Org Time Rank Unique       | CALCULATED   | INTEGER   |

**Table 3–13 (Cont.) Measures in the Sales Cube**

| Measure Name             | Measure Description                    | Measure Type | Data Type |
|--------------------------|--|--------------|-----------|
| S_UNITS_ORG_SHR_TOT      | Sales Units Share of Total Org         | CALCULATED   | DECIMAL   |
| S_UNITS_ORG_SHR_PRNT     | Sales Units Share of Org Parent        | CALCULATED   | NUMBER    |
| S_UNITS_ORG_SHR_AREA     | Sales Units Share of Org Area Ancestor | CALCULATED   | NUMBER    |
| S_UNITS_ORG_RANK_U       | Sales Units Org Rank Unique            | CALCULATED   | INTEGER   |
| S_UNITS_ORG_RANK_UNAL    | Sales Units Org Rank Unique NALAST     | CALCULATED   | INTEGER   |
| S_UNITS_ORG_RANK_UNAF    | Sales Units Org Rank Unique NAFIRST    | CALCULATED   | INTEGER   |
| S_UNITS_LY               | Sales Units Last Year                  | CALCULATED   | INTEGER   |
| S_UNITS_LY_PCT_CHG       | Sales Units % Chg Last Year            | CALCULATED   | DECIMAL   |
| S_UNITS_LY_CHG           | Sales Units Change Last Year           | CALCULATED   | INTEGER   |
| S_UNITS_LP               | Sales Units Last Period                | CALCULATED   | INTEGER   |
| S_UNITS_LP_PCT_CHG       | Sales Units % Chg Last Period          | CALCULATED   | DECIMAL   |
| S_UNITS_LP_CHG           | Sales Units Change Last Period         | CALCULATED   | INTEGER   |
| RETURN_VALUE             | Return Value                           | STORED       | DECIMAL   |
| RETURN_UNITS             | Return Units                           | STORED       | INTEGER   |
| HOW_IS_S_VALUE_YTD_G_YOY | How is Sales Value YTD Growth YoY      | CALCULATED   | TEXT      |
| HOW_IS_S_VALUE_G_YOY     | How is Sales Value Growth YoY          | CALCULATED   | TEXT      |
| HOW_IS_S_VALUE_G_POP     | How is Sales Value Growth PoP          | CALCULATED   | TEXT      |
| HOW_IS_S_UNITS_YTD_G_YOY | How is Sales Units YTD Growth YoY      | CALCULATED   | TEXT      |
| HOW_IS_S_UNITS_G_YOY     | How is Sales Units Growth YoY          | CALCULATED   | TEXT      |
| HOW_IS_S_UNITS_G_POP     | How is Sales Units Growth PoP          | CALCULATED   | TEXT      |
| GROSS_SALES_VALUE        | Gross Sales Value                      | STORED       | DECIMAL   |
| GROSS_SALES_UNITS        | Gross Sales Units                      | STORED       | INTEGER   |

**Sales Forecast Cube** The Sales Forecast cube, named OOS\_SALES\_FCST, contains 34 stored measures and 30 calculated measures.

Table 3–14, "Measures in the Sales Forecast Cube" describes the measures that are in the OOS\_SALES\_FST cube.

**Table 3–14 Measures in the Sales Forecast Cube**

| Measure Name                  | Measure Description                       | Measure Type | Data Type |
|-------------------------------|---|--------------|-----------|
| SALES_VALUE_TREND_10          | Sales Value Trend Forecast                | STORED       | DECIMAL   |
| SALES_VALUE_TREND_10_WKENDDAY | Sales Value Trend (Weekend Days) Forecast | STORED       | DECIMAL   |
| SALES_VALUE_TREND_10_WKDAY    | Sales Value Trend (Week Days) Forecast    | STORED       | DECIMAL   |
| SALES_VALUE_MAVG_50           | Sales Value Moving Average 500 Forecast   | STORED       | DECIMAL   |
| SALES_VALUE_MAVG_3            | Sales Value Moving Average 3 Forecast     | STORED       | DECIMAL   |

**Table 3–14 (Cont.) Measures in the Sales Forecast Cube**

| <b>Measure Name</b>            | <b>Measure Description</b>  | <b>Measure Type</b> | <b>Data Type</b> |
|--------------------------------|---|---------------------|------------------|
| SALES_VALUE_MAVG_10            | Sales Value Moving Average 10 Forecast  | STORED              | DECIMAL          |
| SALES_VALUE_MAVG_10_WKENDDAY   | Sales Value Moving Average 10 (Weekend Days) Forecast                               | STORED              | DECIMAL          |
| SALES_VALUE_MAVG_10_WKDAY      | Sales Value Moving Average 10 (Week Days) Forecast                                  | STORED              | DECIMAL          |
| SALES_VALUE_HW_364             | Sales Value Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | DECIMAL          |
| SALES_VALUE_HW_364_WKENDDAY    | Sales Value Holt-Winters Forecast (weekend days) using 364 time periods periodicity | STORED              | DECIMAL          |
| SALES_VALUE_HW_364_WKDAY       | Sales Value Holt-Winters Forecast (weekdays) using 364 time periods periodicity     | STORED              | DECIMAL          |
| SALES_VALUE_HW_364_05E_1       | Sales Value Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | DECIMAL          |
| SALES_VALUE_HW_364_05E_1_WKEND | Sales Value Holt-Winters Forecast (weekend days) using 364 time periods periodicity | STORED              | DECIMAL          |
| SALES_VALUE_HW_364_05E_1_WKDAY | Sales Value Holt-Winters Forecast (weekdays) using 364 time periods periodicity     | STORED              | NUMBER           |
| SALES_VALUE_EXPO_10            | Sales Value Exponential Forecast  | STORED              | DECIMAL          |
| SALES_VALUE_EXPO_10_WKENDDAY   | Sales Value Exponential (Weekend Days) Forecast                                     | STORED              | DECIMAL          |
| SALES_VALUE_EXPO_10_WKDAY      | Sales Value Exponential (Week Days) Forecast  | STORED              | DECIMAL          |
| SALES_UNITS_TREND_10           | Sales Units Trend Forecast  | STORED              | INTEGER          |
| SALES_UNITS_TREND_10_WKENDDAY  | Sales Units Trend (Weekend Days) Forecast   | STORED              | INTEGER          |
| SALES_UNITS_TREND_10_WKDAY     | Sales Units Trend (Week Days) Forecast  | STORED              | INTEGER          |
| SALES_UNITS_MAVG_50            | Sales Units Moving Average 50 Forecast  | STORED              | INTEGER          |
| SALES_UNITS_MAVG_3             | Sales Units Moving Average 3 Forecast   | STORED              | INTEGER          |
| SALES_UNITS_MAVG_10            | Sales Units Moving Average 10 Forecast  | STORED              | INTEGER          |
| SALES_UNITS_MAVG_10_WKENDDAY   | Sales Units Moving Average 10 (Weekend Days) Forecast                               | STORED              | INTEGER          |
| SALES_UNITS_MAVG_10_WKDAY      | Sales Units Moving Average 10 (Week Days) Forecast                                  | STORED              | INTEGER          |
| SALES_UNITS_HW_364             | Sales Units Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | INTEGER          |

**Table 3–14 (Cont.) Measures in the Sales Forecast Cube**

| <b>Measure Name</b>            | <b>Measure Description</b>  | <b>Measure Type</b> | <b>Data Type</b> |
|--------------------------------|---|---------------------|------------------|
| SALES_UNITS_HW_364_WKENDDAY    | Sales Units Holt-Winters Forecast (Weekend days) using 364 time periods periodicity | STORED              | INTEGER          |
| SALES_UNITS_HW_364_WKDAY       | Sales Units Holt-Winters Forecast (Week days) using 364 time periods periodicity    | STORED              | INTEGER          |
| SALES_UNITS_HW_364_05E_1       | Sales Units Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | INTEGER          |
| SALES_UNITS_HW_364_05E_1_WKEND | Sales Units Holt-Winters Forecast (Weekend days) using 364 time periods periodicity | STORED              | INTEGER          |
| SALES_UNITS_HW_364_05E_1_WKDAY | Sales Units Holt-Winters Forecast (Week days) using 364 time periods periodicity    | STORED              | INTEGER          |
| SALES_UNITS_EXPO_10            | Sales Units Exponential Forecast  | STORED              | INTEGER          |
| SALES_UNITS_EXPO_10_WKENDDAY   | Sales Units Exponential (Weekend Days) Forecast                                     | STORED              | INTEGER          |
| SALES_UNITS_EXPO_10_WKDAY      | Sales Units Exponential (Week Days) Forecast  | STORED              | INTEGER          |
| OOS_UNITS_TREND_10             | Units Out-of-Stock: Trend   | CALCULATED          | INTEGER          |
| OOS_UNITS_TREND_10_WKE         | Units Out-of-Stock: Weekend Trend   | CALCULATED          | INTEGER          |
| OOS_UNITS_TREND_10_WKE_SITU    | Units Out-of-Stock Situation: Weekend Trend   | CALCULATED          | TEXT             |
| OOS_UNITS_TREND_10_WKD         | Units Out-of-Stock: Weekday Trend   | CALCULATED          | INTEGER          |
| OOS_UNITS_TREND_10_WKD_SITU    | Units Out-of-Stock Situation: Weekday Trend   | CALCULATED          | TEXT             |
| OOS_UNITS_TREND_10_SITU        | Units Out-of-Stock Situation: Trend   | CALCULATED          | TEXT             |
| OOS_UNITS_MAVG_10              | Units Out-of-Stock: Mov Avg   | CALCULATED          | INTEGER          |
| OOS_UNITS_MAVG_10_WKE          | Units Out-of-Stock: Weekend Mov Avg   | CALCULATED          | INTEGER          |
| OOS_UNITS_MAVG_10_WKE_SITU     | Units Out-of-Stock Situation: Weekend Mov Avg                                       | CALCULATED          | TEXT             |
| OOS_UNITS_MAVG_10_WKD          | Units Out-of-Stock: Weekday Mov Avg   | CALCULATED          | INTEGER          |
| OOS_UNITS_MAVG_10_WKD_SITU     | Units Out-of-Stock Situation: Weekday Mov Avg                                       | CALCULATED          | TEXT             |
| OOS_UNITS_MAVG_10_SITU         | Units Out-of-Stock Situation: Mov Avg   | CALCULATED          | TEXT             |
| OOS_UNITS_HW_364               | Units Out-of-Stock: Holt-Winters  | CALCULATED          | INTEGER          |
| OOS_UNITS_HW_364_WKE           | Units Out-of-Stock: Weekend Holt-Winters  | CALCULATED          | INTEGER          |
| OOS_UNITS_HW_364_WKE_SITU      | Units Out-of-Stock Situation: Weekend Holt-Winters                                  | CALCULATED          | TEXT             |

**Table 3–14 (Cont.) Measures in the Sales Forecast Cube**

| Measure Name                  | Measure Description   | Measure Type | Data Type |
|-------------------------------|---|--------------|-----------|
| OOS_UNITS_HW_364_WKD          | Units Out-of-Stock: Weekday Holt-Winters                        | CALCULATED   | INTEGER   |
| OOS_UNITS_HW_364_WKD_SITU     | Units Out-of-Stock Situation: Weekday Holt-Winters              | CALCULATED   | TEXT      |
| OOS_UNITS_HW_364_SITU         | Units Out-of-Stock Situation: Holt-Winters                      | CALCULATED   | TEXT      |
| OOS_UNITS_HW_364_05E          | Units Out-of-Stock: Holt-Winters (param: 0.5)                   | CALCULATED   | INTEGER   |
| OOS_UNITS_HW_364_05E_WKE      | Units Out-of-Stock: Weekend Holt-Winters (param: 0.5)           | CALCULATED   | INTEGER   |
| OOS_UNITS_HW_364_05E_WKE_SITU | Units Out-of-Stock Situation: Weekend Holt-Winters (param: 0.5) | CALCULATED   | TEXT      |
| OOS_UNITS_HW_364_05E_WKD      | Units Out-of-Stock: Weekday Holt-Winters (param: 0.5)           | CALCULATED   | INTEGER   |
| OOS_UNITS_HW_364_05E_WKD_SITU | Units Out-of-Stock Situation: Weekday Holt-Winters (param: 0.5) | CALCULATED   | TEXT      |
| OOS_UNITS_HW_364_05E_SITU     | Units Out-of-Stock Situation: Holt-Winters (param: 0.5)         | CALCULATED   | TEXT      |
| OOS_UNITS_EXPO_10             | Units Out-of-Stock: Exponential                                 | CALCULATED   | INTEGER   |
| OOS_UNITS_EXPO_10_WKE         | Units Out-of-Stock: Weekend Exponential                         | CALCULATED   | INTEGER   |
| OOS_UNITS_EXPO_10_WKE_SITU    | Units Out-of-Stock Situation: Weekend Exponential               | CALCULATED   | TEXT      |
| OOS_UNITS_EXPO_10_WKD         | Units Out-of-Stock: Weekday Exponential                         | CALCULATED   | INTEGER   |
| OOS_UNITS_EXPO_10_WKD_SITU    | Units Out-of-Stock Situation: Weekday Exponential               | CALCULATED   | TEXT      |
| OOS_UNITS_EXPO_10_SITU        | Units Out-of-Stock Situation: Exponential                       | CALCULATED   | TEXT      |

**Inventory Cube** The Inventory cube, named OOS\_INV, contains 6 stored measures and 12 calculated measures.

[Table 3–15, "Measures in the Inventory Cube"](#) describes the measures that are in the OOS\_INV cube.

**Table 3–15 Measures in the Inventory Cube**

| Measure Name                   | Measure Description                      | Measure Type | Data Type |
|--------------------------------|--|--------------|-----------|
| HOW_IS_EOP_SOH_VALUE_G_YOY     | How is EOP SOH Value (Cost) Growth YoY   | CALCULATED   | TEXT      |
| HOW_IS_EOP_SOH_UNITS_G_YOY     | How is EOP SOH Units Growth YoY          | CALCULATED   | TEXT      |
| HOW_IS_EOP_SOH_RTL_VALUE_G_YOY | How is EOP SOH Value (Retail) Growth YoY | CALCULATED   | TEXT      |

**Table 3–15 (Cont.) Measures in the Inventory Cube**

| Measure Name                 | Measure Description                        | Measure Type                             | Data Type |
|------------------------------|--|--|-----------|
| EOP_SOH_VALUE                | EOP SOH Value (Cost)                       | STORED (10gR2),<br>CALCULATED<br>(11gR1) | DECIMAL   |
| EOP_SOH_VALUE_LY             | EOP SOH Value (Cost) Last Year             | CALCULATED                               | DECIMAL   |
| EOP_SOH_VALUE_LY_PCT_CHG     | EOP SOH Value (Cost) % Chg<br>Last Year    | CALCULATED                               | DECIMAL   |
| EOP_SOH_VALUE_LY_CHG         | EOP SOH Value (Cost) Change<br>Last Year   | CALCULATED                               | DECIMAL   |
| EOP_SOH_UNITS                | EOP SOH Units                              | STORED (10gR2),<br>CALCULATED<br>(11gR1) | INTEGER   |
| EOP_SOH_UNITS_LY             | EOP SOH Units Last Year                    | CALCULATED                               | INTEGER   |
| EOP_SOH_UNITS_LY_PCT_CHG     | EOP SOH Units % Chg Last Year              | CALCULATED                               | DECIMAL   |
| EOP_SOH_UNITS_LY_CHG         | EOP SOH Units Change Last Year             | CALCULATED                               | INTEGER   |
| EOP_SOH_RTL_VALUE            | EOP SOH Value (Retail)                     | STORED (10gR2),<br>CALCULATED<br>(11gR1) | DECIMAL   |
| EOP_SOH_RTL_VALUE_LY         | EOP SOH Value (Retail) Last Year           | CALCULATED                               | DECIMAL   |
| EOP_SOH_RTL_VALUE_LY_PCT_CHG | EOP SOH Value (Retail) % Chg<br>Last Year  | CALCULATED                               | DECIMAL   |
| EOP_SOH_RTL_VALUE_LY_CHG     | EOP SOH Value (Retail) Change<br>Last Year | CALCULATED                               | DECIMAL   |
| BOP_SOH_VALUE                | BOP SOH Value (Cost)                       | STORED (10gR2),<br>CALCULATED<br>(11gR1) | DECIMAL   |
| BOP_SOH_UNITS                | BOP SOH Units                              | STORED (10gR2),<br>CALCULATED<br>(11gR1) | INTEGER   |
| BOP_SOH_RTL_VALUE            | BOP SOH Value (Retail)                     | STORED (10gR2),<br>CALCULATED<br>(11gR1) | DECIMAL   |

**Inventory Forecast Cube** The Inventory Forecast cube, named OOS\_INV\_FCST, contains 51 stored measures.

[Table 3–16, "Measures in the Inventory Forecast Cube"](#) describes the measures that are in the OOS\_INV\_FCST cube.

**Table 3–16 Measures in the Inventory Forecast Cube**

| Measure Name               | Measure Description                                   | Measure Type | Data Type |
|----------------------------|---|--------------|-----------|
| EOP_SOH_VAL_TREND_10       | EOP SOH Value (Cost) Trend Forecast                   | STORED       | INTEGER   |
| EOP_SOH_VAL_TREND_10_WKEND | EOP SOH Value (Cost) Trend (Weekend<br>Days) Forecast | STORED       | INTEGER   |
| EOP_SOH_VAL_TREND_10_WKDAY | EOP SOH Value (Cost) Trend (Week<br>Days) Forecast    | STORED       | INTEGER   |
| EOP_SOH_VAL_MAVG_50        | EOP SOH Value (Cost) Moving Average<br>500 Forecast   | STORED       | INTEGER   |

**Table 3–16 (Cont.) Measures in the Inventory Forecast Cube**

| <b>Measure Name</b>          | <b>Measure Description</b>   | <b>Measure Type</b> | <b>Data Type</b> |
|------------------------------|--|---------------------|------------------|
| EOP_SOH_VAL_MAVG_3           | EOP SOH Value (Cost) Moving Average 3 Forecast   | STORED              | INTEGER          |
| EOP_SOH_VAL_MAVG_10          | EOP SOH Value (Cost) Moving Average 10 Forecast  | STORED              | INTEGER          |
| EOP_SOH_VAL_MAVG_10_WKEND    | EOP SOH Value (Cost) Moving Average 10 (Weekend Days) Forecast                               | STORED              | INTEGER          |
| EOP_SOH_VAL_MAVG_10_WKDAY    | EOP SOH Value (Cost) Moving Average 10 (Week Days) Forecast                                  | STORED              | INTEGER          |
| EOP_SOH_VAL_HW_364           | EOP SOH Value (Cost) Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | INTEGER          |
| EOP_SOH_VAL_HW_364_WKEND     | EOP SOH Value (Cost) Holt-Winters Forecast (Weekend Days) using 364 time periods periodicity | STORED              | INTEGER          |
| EOP_SOH_VAL_HW_364_WKDAY     | EOP SOH Value (Cost) Holt-Winters Forecast (Week Days) using 364 time periods periodicity    | STORED              | INTEGER          |
| EOP_SOH_VAL_HW_364_05E_1     | EOP SOH Value (Cost) Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | INTEGER          |
| EOP_SOH_VAL_HW_364_05E_1_WKE | EOP SOH Value (Cost) Holt-Winters Forecast (Weekend days) using 364 time periods periodicity | STORED              | INTEGER          |
| EOP_SOH_VAL_HW_364_05E_1_WKD | EOP SOH Value (Cost) Holt-Winters Forecast (Week days) using 364 time periods periodicity    | STORED              | INTEGER          |
| EOP_SOH_VAL_EXPO_10          | EOP SOH Value (Cost) Exponential Forecast  | STORED              | INTEGER          |
| EOP_SOH_VAL_EXPO_10_WKEND    | EOP SOH Value (Cost) Exponential (Weekend Days) Forecast                                     | STORED              | INTEGER          |
| EOP_SOH_VAL_EXPO_10_WKDAY    | EOP SOH Value (Cost) Exponential (Week Days) Forecast  | STORED              | INTEGER          |
| EOP_SOH_UNITS_TREND_10       | EOP SOH Units Trend Forecast   | STORED              | INTEGER          |
| EOP_SOH_UNITS_TREND_10_WKEND | EOP SOH Units Trend (Weekend Days) Forecast  | STORED              | INTEGER          |
| EOP_SOH_UNITS_TREND_10_WKDAY | EOP SOH Units Trend (Week Days) Forecast   | STORED              | INTEGER          |
| EOP_SOH_UNITS_MAVG_50        | EOP SOH Units Moving Average 50 Forecast   | STORED              | INTEGER          |
| EOP_SOH_UNITS_MAVG_3         | EOP SOH Units Moving Average 3 Forecast  | STORED              | INTEGER          |
| EOP_SOH_UNITS_MAVG_10        | EOP SOH Units Moving Average 10 Forecast   | STORED              | INTEGER          |
| EOP_SOH_UNITS_MAVG_10_WKEND  | EOP SOH Units Moving Average 10 (Weekend Days) Forecast                                      | STORED              | INTEGER          |
| EOP_SOH_UNITS_MAVG_10_WKDAY  | EOP SOH Units Moving Average 10 (Week Days) Forecast   | STORED              | INTEGER          |

**Table 3–16 (Cont.) Measures in the Inventory Forecast Cube**

| <b>Measure Name</b>            | <b>Measure Description</b>   | <b>Measure Type</b> | <b>Data Type</b> |
|--------------------------------|--|---------------------|------------------|
| EOP_SOH_UNITS_HW_364           | EOP SOH Units Holt-Winters Forecast (day) using 364 time periods periodicity                   | STORED              | INTEGER          |
| EOP_SOH_UNITS_HW_364_WKEND     | EOP SOH Units Holt-Winters Forecast (Weekend Days) using 364 time periods periodicity          | STORED              | INTEGER          |
| EOP_SOH_UNITS_HW_364_WKDAY     | EOP SOH Units Holt-Winters Forecast (Week Days) using 364 time periods periodicity             | STORED              | INTEGER          |
| EOP_SOH_UNITS_HW_364_05E_1     | EOP SOH Units Holt-Winters Forecast (day) using 364 time periods periodicity                   | STORED              | INTEGER          |
| EOP_SOH_UNITS_HW_364_05E_1_WKE | EOP SOH Units Holt-Winters Forecast (Weekend days) using 364 time periods periodicity          | STORED              | INTEGER          |
| EOP_SOH_UNITS_HW_364_05E_1_WKD | EOP SOH Units Holt-Winters Forecast (Week days) using 364 time periods periodicity             | STORED              | INTEGER          |
| EOP_SOH_UNITS_EXPO_10          | EOP SOH Units Exponential Forecast   | STORED              | INTEGER          |
| EOP_SOH_UNITS_EXPO_10_WKEND    | EOP SOH Units Exponential (Weekend Days) Forecast  | STORED              | INTEGER          |
| EOP_SOH_UNITS_EXPO_10_WKDAY    | EOP SOH Units Exponential (Week Days) Forecast   | STORED              | INTEGER          |
| EOP_SOH_RTVAL_TREND_10         | EOP SOH Value (Retail) Trend Forecast  | STORED              | INTEGER          |
| EOP_SOH_RTVAL_TREND_10_WKEND   | EOP SOH Value (Retail) Trend (Weekend Days) Forecast   | STORED              | INTEGER          |
| EOP_SOH_RTVAL_TREND_10_WKDAY   | EOP SOH Value (Retail) Trend (Week Days) Forecast  | STORED              | INTEGER          |
| EOP_SOH_RTVAL_MAVG_50          | EOP SOH Value (Retail) Moving Average 500 Forecast   | STORED              | INTEGER          |
| EOP_SOH_RTVAL_MAVG_3           | EOP SOH Value (Retail) Moving Average 3 Forecast   | STORED              | INTEGER          |
| EOP_SOH_RTVAL_MAVG_10          | EOP SOH Value (Retail) Moving Average 10 Forecast  | STORED              | INTEGER          |
| EOP_SOH_RTVAL_MAVG_10_WKEND    | EOP SOH Value (Retail) Moving Average 10 (Weekend Days) Forecast                               | STORED              | INTEGER          |
| EOP_SOH_RTVAL_MAVG_10_WKDAY    | EOP SOH Value (Retail) Moving Average 10 (Week Days) Forecast                                  | STORED              | INTEGER          |
| EOP_SOH_RTVAL_HW_364           | EOP SOH Value (Retail) Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | INTEGER          |
| EOP_SOH_RTVAL_HW_364_WKEND     | EOP SOH Value (Retail) Holt-Winters Forecast (Weekend Days) using 364 time periods periodicity | STORED              | INTEGER          |
| EOP_SOH_RTVAL_HW_364_WKDAY     | EOP SOH Value (Retail) Holt-Winters Forecast (Week Days) using 364 time periods periodicity    | STORED              | INTEGER          |
| EOP_SOH_RTVAL_HW_364_05E_1     | EOP SOH Value (Retail) Holt-Winters Forecast (day) using 364 time periods periodicity          | STORED              | INTEGER          |

**Table 3–16 (Cont.) Measures in the Inventory Forecast Cube**

| Measure Name                   | Measure Description  | Measure Type | Data Type |
|--------------------------------|--|--------------|-----------|
| EOP_SOH_RTVAL_HW_364_05E_1_WKE | EOP SOH Value (Retail) Holt-Winters Forecast (Weekend days) using 364 time periods periodicity | STORED       | INTEGER   |
| EOP_SOH_RTVAL_HW_364_05E_1_WKD | EOP SOH Value (Retail) Holt-Winters Forecast (Week days) using 364 time periods periodicity    | STORED       | INTEGER   |
| EOP_SOH_RTVAL_EXPO_10          | EOP SOH Value (Retail) Exponential Forecast  | STORED       | INTEGER   |
| EOP_SOH_RTVAL_EXPO_10_WKEND    | EOP SOH Value (Retail) Exponential (Weekend Days) Forecast                                     | STORED       | INTEGER   |
| EOP_SOH_RTVAL_EXPO_10_WKDAY    | EOP SOH Value (Retail) Exponential (Week Days) Forecast  | STORED       | INTEGER   |

## Relational Views Used for the OLAP Component

The `bia_rtl_olap` schema defines several relational views that are used by the OLAP component. There are two types of relational views defined in the `bia_rtl_olap` schema:

- [Relational Views Used When Loading the Analytic Workspace](#)
- [Relational Views of the OLAP Cubes Used for SQL Query and Reporting](#)

### Relational Views Used When Loading the Analytic Workspace

The `bia_rtl_olap` schema defines relational views used by Oracle Retail Data Model when loading the analytic workspace:

- [Relational views used when populating OLAP dimensions](#)
- [Relational views used when populating the OLAP Sales cube](#)
- [Relational views used when populating the OLAP Inventory cube](#)

**Relational views used when populating OLAP dimensions** [Table 3–17](#) outlines the relational views in the `bia_rtl_olap` schema that are used when loading OLAP dimensions.

**Table 3–17 Relational Views Used When Populating OLAP Dimensions**

| Relational View | OLAP Dimension | Defined using these <code>bia_rtl</code> relational tables  |
|-----------------|----------------|---|
| DWV_PROD_DIM    | Product        | DWR_CMPNY<br>DWR_ITEM_DIV<br>DWR_ITEM_GRP<br>DWR_ITEM_DEPT<br>DWR_ITEM_SBDEPT<br>DWR_ITEM_CLASS<br>DWR_ITEM_SBC<br>DWR_ITEM_CLSTR<br>DWR_ITEM<br>DWR_SKU_ITEM |

**Table 3–17 (Cont.) Relational Views Used When Populating OLAP Dimensions**

| Relational View | OLAP Dimension | Defined using these <code>bia_rtl</code> relational tables  |
|-----------------|----------------|---|
| DWV_ORG_DIM     | Organization   | DWR_CMPNY<br>DWR_ORG_CHAIN<br>DWR_ORG_AREA<br>DWR_ORG_RGN<br>DWR_ORG_DSTRC<br>DWR_ORG_DIV<br>DWR_ORG_BNR<br>DWR_ORG_BSNS_UNIT |
| DWV_TIME_DIM    | Time           | DWR_DAY   |

**Relational views used when populating the OLAP Sales cube** To control population of the OLAP Sales cube, the following relational views are defined in the `bia_rtl_olap` schema:

- `DWV_SALES_ITEM_DAY_CURR`  
The OLAP Sales cube is mapped to this relational view.
- `DWV_SALES_ITEM_DAY_FULL` and `DWV_SALES_ITEM_DAY_INCR`  
These relational views are designed to cover contiguous date ranges that are controlled through the start and end date parameters specified in the `BIA_RTL.DWC_ETL_PARAMETER` table for process name "RBIA-INTRA-ETL-OLAP":
  - For an historical load, the `DWV_SALES_ITEM_DAY_CURR` relational view points to the `DWV_SALES_ITEM_DAY_FULL` relational view.
  - For an incremental load, the `DWV_SALES_ITEM_DAY_CURR` relational view points to the `DWV_SALES_ITEM_DAY_INCR` relational view.

All of the relational views depend on:

`bia.rtl.DWD_RTL_SL_RETRN_ITEM_DAY` table  
`bia_rtl_olap.DWV_TIME_DIM` view

**Relational views used when populating the OLAP Inventory cube** To control population of the OLAP Inventory cube, the following relational views are defined in the `bia_rtl_olap` schema:

- `DWV_INV_POSN_ITEM_DAY_CURR`  
The OLAP Inventory cube is mapped to this relational view.
- `DWV_INV_POSN_ITEM_DAY_FULL` and `DWV_INV_POSN_ITEM_DAY_INCR`  
These relational views are designed to cover contiguous date ranges that are controlled through the start and end date parameters specified in the `BIA_RTL.DWC_ETL_PARAMETER` table for process name "RBIA-INTRA-ETL-OLAP":
  - For an historical load, the `DWV_INV_POSN_ITEM_DAY_CURR` relational view points to the `DWV_INV_POSN_ITEM_DAY_FULL` relational view.
  - For an incremental load, the `DWV_INV_POSN_ITEM_DAY_CURR` relational view points to the `DWV_INV_POSN_ITEM_DAY_INCR` relational view.

All of the relational views depend on:

`bia.rtl.DWD_INV_POSN_BY_ITEM_DAY` table  
`bia_rtl_olap.DWV_TIME_DIM` view

## Relational Views of the OLAP Cubes Used for SQL Query and Reporting

The `bia_rtl_olap` schema defines the relational views that you can use to access the OLAP cubes using SQL. The relational views that are provided vary depending on Oracle Database version.

### Relational views for SQL access of OLAP cube data in both Oracle Database 10g and Oracle Database 11g

The `bia_rtl_olap` schema for both of these Oracle Database releases defines a relational view named, `OOS_CUBEVIEW`. `OOS_CUBEVIEW` is a relational view of all of the data in all of the cubes in the analytic workspace presented in a completely "flat" form. The "key" columns of this view are the tuples of all of the OLAP dimensions and levels defined in the `PSLSINV` analytic workspace. The data columns of this view are all of the OLAP measures.

You can use `OOS_CUBEVIEW` to access the data in the OLAP cube using SQL tools. For example, you can use this view create an Oracle Business Intelligence Enterprise Edition (OBIEE) repository that will allow the OBIEE Server (and therefore any OBIEE client, including as Dashboards, Answers, Delivers and the MS Office Plug-in) to query the Oracle Retail Data Model OLAP cubes.the Oracle Retail Data Model.

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**Note:** The sample reports delivered with Oracle Retail Data Model were developed using OBIEE Dashboard using the sample repository file `RBIAT11.rpd`. The `RBIAT11` repository contains a physical area named `RBIAT11_OLAP` that utilizes the `OOS_CUBEVIEW` relational view.

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**Relational views for SQL access of OLAP cube data in Oracle Database 11g** In addition to the default SQL reporting view `OOS_CUBEVIEW`, the `bia_rtl_olap` schema for Oracle Database 11g also defines relational views with a `_VIEW` suffix. These are relational views that parallel the Analytic Workspace Manager perspective of the `PSLSINV` analytic workspace. These relational views include views of :

- OLAP dimensions and hierarchies (for example, `PRODUCT_VIEW`, `PRODUCT_HPROD_VIEW`, `TIME_VIEW`, `TIME_HTBSNS_VIEW`, and `TIME_HTCLNDR_VIEW`).
- OLAP cubes (that is, `OOS_SALES_VIEW`, `OOS_INV_CUBE_VIEW`, `OOS_SALES_FCST_VIEW`, and `OOS_INV_FCST_VIEW`).

Using these views, it is possible to model the OLAP dimension and cube views as a relational star schema.

Also, when using the OLAP component in Oracle Database 11g you can use the OBIEE Plug-in for Analytic Workspace Manager (AWM) to quickly create an OBIEE repository that will allow you to query the Oracle Retail Data Model OLAP cubes.

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**Note:** The OBIEE Plug-in for AWM is available for download from the Oracle Technology Network Web site at <http://www.oracle.com/technology/index.html>.

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## Logical to Physical Mappings in the Oracle Retail Data Model

The following table lists the entities in the logical data model, and the physical database tables or views to which they have been implemented or "physicalized".

### Entity Mapping Table

Table 4–1 lists the entities and the tables or views they map to.

**Table 4–1 Entity Mapping Table**

| Entity                       | Table or View                                     |
|------------------------------|---|
| ACCOUNT TYPE                 | DWL_ACCT_TYP (View)                               |
| ACTIVITY REQUEST TYPE        | DWL_ACTVTY_RQST_TYP (View)                        |
| ADDRESS LOCATION             | DWR_ADDR_LOC                                      |
| ADDRESS LOCATION HISTORY     | DWR_ADDR_LOC_HIST                                 |
| ADDRESS RELATED              | DWR_ADDR_RLTD                                     |
| ADDRESS TELEPHONE            | DWR_ADDR_PHONE                                    |
| ADDRESS TYPE                 | DWL_ADDR_TYP (View)                               |
| ADVERTISING PERIOD           | DWR_ADVR_PERIOD                                   |
| ADVERTISING QUARTER          | DWR_ADVR_QTR                                      |
| ADVERTISING WEEK             | DWR_ADVR_WK                                       |
| ADVERTISING YEAR             | DWR_ADVR_YR                                       |
| AGE RESTRICTION RULE         | Subentity of SALES RESTRICTION (Reference Entity) |
| AGGREGATE SKU                | Subentity of SKU ITEM (Reference Entity)          |
| ALTERNATIVE ITEM             | DWR_ALTVE_ITEM                                    |
| ANALYSIS DURATION            | DWL_ANALYSIS_DURATION                             |
| APPOINTMENT CALENDAR         | DWR_APPT_CALNDR                                   |
| APPOINTMENT TYPE             | DWL_APPT_TYP (View)                               |
| AUTHORIZATION METHOD         | DWL_ATHRZTN_MTHD (View)                           |
| BRAND                        | DWR_BRND  |
| BUSINESS ENTITY SELLING RULE | DWR_BSNS_ENT_SLNG_RULE                            |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                           | <b>Table or View</b>   |
|---|--|
| BUSINESS ENTITY TENDER RESTRICTION RULE | DWR_BSNS_ENT_TNDR_RSTRCT_RULE                                |
| BUSINESS HALF MONTH                     | DWR_BSNS_HLF_MO  |
| BUSINESS HALF YEAR                      | DWR_BSNS_HLF_YR  |
| BUSINESS MONTH                          | DWR_BSNS_MO  |
| BUSINESS QUARTER                        | DWR_BSNS_QTR   |
| BUSINESS UNIT CALENDAR                  | DWR_BSNS_UNIT_CLNDR  |
| BUSINESS UNIT JOB ROLE                  | DWR_BSNS_UNIT_JB_RL  |
| BUSINESS UNIT SHIFT                     | DWR_BSNS_UNIT_SHFT   |
| BUSINESS UNIT TYPE                      | DWL_BSNS_UNIT_TYP (View)                                     |
| BUSINESS UNIT USAGE TYPE                | DWL_BSNS_UNIT_USG_TYP (View)                                 |
| BUSINESS WEEK                           | DWR_BSNS_WK  |
| BUSINESS YEAR                           | DWR_BSNS_YR  |
| CALENDAR HALF MONTH                     | DWR_CLNDR_HLF_MO   |
| CALENDAR HALF YEAR                      | DWR_CLNDR_HLF_YR   |
| CALENDAR MONTH                          | DWR_CLNDR_MO   |
| CALENDAR QUARTER                        | DWR_CLNDR_QTR  |
| CALENDAR WEEK                           | DWR_CLNDR_WK   |
| CALENDAR YEAR                           | DWR_CLNDR_YR   |
| CALL CENTER                             | Subentity of TOUCHPOINT (Reference Entity)                   |
| CAMPAIGN                                | DWR_CMPGN  |
| CAMPAIGN COST                           | Subentity of CAMPAIGN CUSTOMER ASSIGNMENT (Reference Entity) |
| CAMPAIGN CUSTOMER ASSIGNMENT            | DWR_CMPGN_CUST_ASGNMNT                                       |
| CAMPAIGN EXECUTION MESSAGE              | DWR_CMPGN_EXECUTION_MSG                                      |
| CAMPAIGN MEDIA                          | DWR_CMPGN_MEDIA  |
| CAMPAIGN MEDIA LAUNCH                   | DWR_CMPGN_MEDIA_LAUNCH                                       |
| CAMPAIGN MEDIA SELLING ITEM             | DWR_CMPGN_MEDIA_SLNG_ITEM                                    |
| CAMPAIGN MESSAGE DEPICTION              | DWR_CMPGN_MSG_DPCT   |
| CAMPAIGN MESSAGE RENDERING              | DWR_CMPGN_MSG_RNDRNG   |
| CAMPAIGN TARGET                         | Subentity of CAMPAIGN CUSTOMER ASSIGNMENT (Reference Entity) |
| CARD TYPE                               | DWL_CARD_TYP (View)  |
| CARRIER                                 | DWR_CARRIER  |
| CARRIER COMPLIANCE WEEK AGGR            | DWA_CARRIER_CMPLNC_WK  |
| CATALOG REQUEST BY DAY DERIVED          | DWD_CTLG_RQST_BY_DAY   |

**Table 4-1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                            | <b>Table or View</b>                                       |
|--|--|
| CATALOG REQUEST TYPE                     | DWL_CTLG_RQST_TYP (View)                                   |
| CATALOG TYPE                             | DWL_CTLG_TYP (View)  |
| CERTIFICATE                              | DWR_CERTIFICATE  |
| CERTIFICATE ACTIVITY DAY AGGR            | DWA_CERTIFICATE_ACTVTY_DAY                                 |
| CERTIFICATE ACTIVITY TRANSACTION DERIVED | DWD_CERTIFICATE_ACTVTY_TRX                                 |
| CERTIFICATE ACTIVITY WEEK AGGR           | DWA_CERTIFICATE_ACTVTY_WK                                  |
| CERTIFICATE AGE BAND                     | DWL_CERTIFICATE_AGE_BND                                    |
| CERTIFICATE ESCHEATED DAY                | DWB_CERTIFICATE_ESCHTD_DAY                                 |
| CERTIFICATE LINE ITEM                    | DWB_CERTIFICATE_LI   |
| CERTIFICATE TENDER                       | DWB_CERTIFICATE_TNDR                                       |
| CERTIFICATE TYPE                         | DWL_CERTIFICATE_TYP (View)                                 |
| CHANNEL TYPE                             | DWL_CHNL_TYP (View)  |
| CHECK IN TYPE                            | DWL_CHECK_IN_TYP (View)                                    |
| CHECK TENDER                             | DWB_CHECK_TNDR   |
| COATING                                  | DWL_COATING (View)   |
| CODE MASTER                              | DWL_CODE_MASTER  |
| COLOR                                    | DWL_COLOR (View)   |
| COMMUNICATION TYPE                       | DWL_COMUNICTN_TYP  |
| COMPANY                                  | DWR_CMPNY  |
| COMPETITOR                               | DWR_CMPTR  |
| COMPETITOR LOCATION                      | DWR_CMPTR_LOC  |
| COMPETITOR LOCATION ASSIGNMENT           | DWR_CMPTR_LOC_ASGNMNT                                      |
| COMPETITOR RETAIL ITEM                   | DWR_CMPTR_RTL_ITEM   |
| COST                                     | Subentity of CAMPAIGN MESSAGE RENDERING (Reference Entity) |
| COST PER UNIT TYPE                       | DWL_COST_PER_UNIT_TYP (View)                               |
| COUPON SCAN                              | DWL_CPN_SCAN (View)  |
| CREATIVES                                | DWR_CREA   |
| CREDIT-DEBIT CARD TENDER                 | DWB_CR_DEBIT_CARD_TNDR                                     |
| CURRENCY                                 | DWL_CRNCY  |
| CUST EMPLOYEE RELATIONSHIP MONTH AGGR    | DWA_CUST_EMP_RLTNSHP_MO                                    |
| CUSTOMER                                 | DWR_CUST   |
| CUSTOMER ACCOUNT                         | DWR_CUST_ACCT  |
| CUSTOMER ACCOUNT TENDER                  | DWB_CUST_ACCT_TNDR   |
| CUSTOMER ADDRESS                         | DWR_CUST_ADDR  |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                            | <b>Table or View</b>                     |
|--|--|
| CUSTOMER AFFILIATION                     | DWR_CUST_AFFLTN                          |
| CUSTOMER CLUSTER                         | DWR_CUST_CLSTR                           |
| CUSTOMER CLUSTER ITEM ASSIGNMENT         | DWR_CUST_CLSTR_ITEM_ASGNMNT              |
| CUSTOMER EMPLOYEE RELATIONSHIP DAY       | DWD_CUST_EMP_RLTNSHP_DAY                 |
| CUSTOMER EMPLOYEE SALE RETURN MONTH AGGR | DWA_CUST_EMP_SL_RETRN_MO                 |
| CUSTOMER EMPLOYEE SALE RETURN WEEK AGGR  | DWA_CUST_EMP_SL_RETRN_WK                 |
| CUSTOMER GROUP                           | DWR_CUST_GRP                             |
| CUSTOMER GROUP ITEM                      | DWR_CUST_GRP_ITEM                        |
| CUSTOMER OCCASION                        | DWR_CUST_OCCSN                           |
| CUSTOMER OCCASION TYPE                   | DWL_CUST_OCCSN_TYP (View)                |
| CUSTOMER ORDER                           | DWB_CUST_ORDR                            |
| CUSTOMER ORDER DEPARTMENT DAY AGGR       | DWA_CUST_ORDR_DEPT_DAY                   |
| CUSTOMER ORDER DEPARTMENT MONTH AGGR     | DWA_CUST_ORDR_DEPT_MO                    |
| CUSTOMER ORDER HOLD EVENT                | DWL_CUST_ORDR_HOLD_EVNT (View)           |
| CUSTOMER ORDER ITEM DAY DERIVED          | DWD_CUST_ORDR_ITEM_DAY                   |
| CUSTOMER ORDER ITEM MONTH AGGR           | DWA_CUST_ORDR_ITEM_MO                    |
| CUSTOMER ORDER ITEM WEEK AGGR            | DWA_CUST_ORDR_ITEM_WK                    |
| CUSTOMER ORDER LINE ITEM                 | DWB_CUST_ORDR_LI                         |
| CUSTOMER ORDER LINE ITEM STATE ASSIGN    | DWB_CUST_ORDR_LI_STATE_ASSIGN            |
| CUSTOMER ORDER LINE ITEM STATE DERIVED   | DWD_CUST_ORDR_LI_STATE                   |
| CUSTOMER ORDER STATE                     | DWB_CUST_ORDR_STATE                      |
| CUSTOMER ORDER SUBCLASS DAY AGGR         | DWA_CUST_ORDR_SBC_DAY                    |
| CUSTOMER ORDER SUBCLASS MONTH AGGR       | DWA_CUST_ORDR_SBC_MO                     |
| CUSTOMER ORDER SUBCLASS WEEK AGGR        | DWA_CUST_ORDR_SBC_WK                     |
| CUSTOMER PICKUP TYPE                     | DWL_CUST_PCKUP_TYP (View)                |
| CUSTOMER PREFERENCE                      | DWR_CUST_PREF                            |
| CUSTOMER QUICK FACTS                     | Subentity of CUSTOMER (Reference Entity) |
| CUSTOMER RELATIONSHIP                    | DWR_CUST_RLTNSHP                         |
| CUSTOMER RESTRICTED INFO                 | DWR_CUST_RSTRCTD_INFO                    |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                        | <b>Table or View</b>                 |
|--------------------------------------|--------------------------------------|
| CUSTOMER RFMP SCORE                  | DWD_CUST_RFMP_SCR                    |
| CUSTOMER SERVICE REQUEST             | DWB_CUST_SRVC_RQST                   |
| CUSTOMER SKU SALE RETURN DAY DERIVED | DWD_CUST_SKU_SL_RETRN_DAY            |
| CUSTOMER STATUS                      | DWR_CUST_STATUS                      |
| DAY                                  | DWR_DAY                              |
| DAY ACTUAL CONDITION                 | DWB_DAY_ACT_CONDITION                |
| DAY TODATE TRANSFORMATION            | DWB_DAY_TODATE_TRANS                 |
| DAY TRANSFORMATION                   | DWR_DAY_TRANS                        |
| DEAL                                 | DWB_DEAL                             |
| DEAL VENDOR ITEM ASSIGNMENT          | DWB_DEAL_VNDR_ITEM_ASGNMNT           |
| DEMOGRAPHY ATTRIBUTE                 | DWR_DEMOG_ATTR                       |
| DEMOGRAPHY GROUP                     | DWR_DEMOG_GRP                        |
| DENOMINATION                         | DWL_DENMTN                           |
| DEPOSIT RULE                         | DWR_DPST_RULE                        |
| DERIVED VALUE                        | DWR_DRVD_VAL                         |
| DISCOUNT LINE ITEM                   | DWB_DISC_LI                          |
| DISCOUNT TYPE                        | DWL_DISC_TYP                         |
| DISCREPANCY TOLERANCE RULE           | DWR_DSCRPNCY_TOLRNC_RULE             |
| DISPLAY UNIT ITEM                    | Subentity of ITEM (Reference Entity) |
| DISPOSITION TYPE                     | DWL_DSPSTN_TYP (View)                |
| DYE                                  | DWL_DYE (View)                       |
| EMAIL ADDRESS                        | DWR_EMAIL_ADDR                       |
| EMPLOYEE                             | DWR_EMP                              |
| EMPLOYEE ACTUAL LABOR HOURLY         | DWR_EMP_ACT_LBR_HRLY                 |
| EMPLOYEE ACTUAL LABOR SALARIED       | DWR_EMP_ACT_LBR_SAL                  |
| EMPLOYEE ADDRESS                     | DWR_EMP_ADDR                         |
| EMPLOYEE DESIGNATION                 | DWR_EMP_DESIG                        |
| EMPLOYEE DISCOUNT GROUP              | DWR_EMP_DISC_GRP                     |
| EMPLOYEE DISCOUNT GROUP ASSIGNMENT   | DWR_EMP_DISC_GRP_ASGNMNT             |
| EMPLOYEE JOB ROLE ASSIGNMENT         | DWR_EMP_JOB_ROLE_ASGNMNT             |
| EMPLOYEE LABOR                       | DWB_EMP_LBR                          |
| EMPLOYEE RESTRICTED INFORMATION      | DWR_EMP_RSTRCTD_INFO                 |
| EMPLOYEE SCHEDULE                    | DWR_EMP_SCHL                         |

**Table 4-1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                        | <b>Table or View</b>                     |
|--------------------------------------|--|
| EMPLOYEE TRAINING RECORD             | DWR_EMP_TRNG_REC                         |
| EMPLOYEE TYPE                        | DWL_EMP_TYP (View)                       |
| ENTRY METHOD                         | DWL_ENTRY_MTHD (View)                    |
| ENVIRONMENT TYPE                     | DWL_ENV_TYP (View)                       |
| EVENT                                | DWR_EVNT                                 |
| EXCHANGE RATE CURRENCY DAY           | DWB_EXCHNG_RATE_CRNCY_DAY                |
| EXTERNAL DEPOSITORY                  | DWR_EXTRNL_DPSTRY                        |
| FABRIC                               | DWL_FABRIC (View)                        |
| FACTOR COMPANY                       | DWR_FCTR_CMPNY                           |
| FIBER                                | DWL_FIBRE (View)                         |
| FISCAL HALF MONTH                    | DWR_FSCL_HLF_MO                          |
| FISCAL HALF YEAR                     | DWR_FSCL_HLF_YR                          |
| FISCAL MONTH                         | DWR_FSCL_MO                              |
| FISCAL QUARTER                       | DWR_FSCL_QTR                             |
| FISCAL WEEK                          | DWR_FSCL_WK                              |
| FISCAL YEAR                          | DWR_FSCL_YR                              |
| GEOGRAPHY DEMOGRAPHIC GROUP          | DWR_GEOG_DEMOG_GRP                       |
| GEOGRAPHY DEMOGRAPHY ATTRIBUTE       | DWR_GEOG_DEMOG_ATTR                      |
| GEOGRAPHY DEMOGRAPHY VALUE           | DWR_GEOG_DEMOG_VAL                       |
| GEOGRAPHY ENTITY                     | DWR_GEOG_ENT                             |
| GEOGRAPHY HIERARCHY                  | DWR_GEOG_HRCHY                           |
| GEOGRAPHY HIERARCHY LEVEL            | DWR_GEOG_HRCHY_LVL                       |
| GEOGRAPHY HIERARCHY LEVEL ASSIGNMENT | DWR_GEOG_HRCHY_LVL_ASGNMNT               |
| GEOGRAPHY HIERARCHY VERSION          | DWR_GEOG_HRCHY_VRSN                      |
| GEOGRAPHY LEVEL                      | DWR_GEOG_LVL                             |
| GEOGRAPHY LEVEL ATTRIBUTE VALUE      | DWR_GEOG_LVL_ATTR_VAL                    |
| GEOGRAPHY LEVEL ATTRIBUTES           | DWR_GEOG_LVL_ATTR                        |
| GROUP SELECT                         | Subentity of SKU ITEM (Reference Entity) |
| GROUP SELECT ITEM                    | Subentity of ITEM (Reference Entity)     |
| HALF HOUR                            | DWR_HLF_HR                               |
| HALF MONTH TODATE TRANSFORMATION     | DWR_HLF_MO_TODATE_TRANS                  |
| HALF MONTH TRANSFORMATION            | DWR_HLF_MO_TRANS                         |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                            | <b>Table or View</b>       |
|--|----------------------------|
| HALF YEAR TODATE TRANSFORMATION          | DWR_HLF_YR_TODATE_TRANS    |
| HALF YEAR TRANSFORMATION                 | DWR_HLF_YR_TRANS           |
| HAZARDOUS MATERIAL TYPE                  | DWL_HZRDS_MTRL_TYP (View)  |
| HOUR                                     | DWR_HR                     |
| HOUSEHOLD                                | DWR_HH                     |
| INDIVIDUAL DEMOGRAPHY VALUE              | DWR_INDVL_DEMOG_VAL        |
| INVENTORY ACCOUNTING METHOD              | DWL_INV_ACCT_MTHD (View)   |
| INVENTORY ADJUSTMENT BY ITEM DAY DERIVED | DWD_INV_ADJ_BY_ITEM_DAY    |
| INVENTORY BUDGET BY WEEK AGGR            | DWA_INV_BDGT_BY_WK         |
| INVENTORY CONDITION                      | DWL_INV_CNDTN (View)       |
| INVENTORY CONTROL DOCUMENT               | Main Entity of Base        |
| INVENTORY CONTROL DOCUMENT LINE ITEM     | DWB_INV_CNTRL_DOC_LI       |
| INVENTORY DOCUMENT TYPE                  | DWI_INV_DOC_TYP (View)     |
| INVENTORY ITEM STATE                     | DWB_INV_ITEM_STATE         |
| INVENTORY ITEM STATE HISTORY WEEK        | DWA_INV_ITEM_STATE_HIST_WK |
| INVENTORY LOCATION                       | DWR_INV_LOC                |
| INVENTORY LOCATION TYPE                  | DWI_INV_LOC_TYP (View)     |
| INVENTORY POSITION BY DEPT WEEK AGGR     | DWA_INV_POSN_BY_DEPT_WK    |
| INVENTORY POSITION BY ITEM DAY DERIVED   | DWD_INV_POSN_BY_ITEM_DAY   |
| INVENTORY POSITION BY ITEM WEEK AGGR     | DWA_INV_POSN_BY_ITEM_WK    |
| INVENTORY POSITION BY SUBCLASS DAY AGGR  | DWA_INV_POSN_BY_SBC_DAY    |
| INVENTORY POSITION BY SUBCLASS WEEK AGGR | DWA_INV_POSN_BY_SBC_WK     |
| INVENTORY POSITON BY DEPT DAY AGGR       | DWA_INV_POSN_BY_DEPT_DAY   |
| INVENTORY RECEIPT BY ITEM DAY AGGR       | DWA_INV_RCPT_BY_ITEM_DAY   |
| INVENTORY RECEIPT BY ITEM WEEK AGGR      | DWA_INV_RCPT_BY_ITEM_WK    |
| INVENTORY RECEIPT BY SUBCLASS DAY AGGR   | DWA_INV_RCPT_BY_SBC_DAY    |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                               | <b>Table or View</b>                              |
|---|---|
| INVENTORY RECEIPT BY<br>SUBCLASS WEEK AGGR  | DWA_INV_RCPT_BY_SBC_WK                            |
| INVENTORY STATE                             | DWL_INV_STATE                                     |
| INVENTORY STATUS                            | DWL_INV_STATUS                                    |
| INVENTORY TRANSFER BY ITEM<br>DAY AGGR      | DWA_INV_TRNSFR_BY_ITEM_DAY                        |
| INVENTORY TRANSFER BY ITEM<br>WEEK AGGR     | DWA_INV_TRNSFR_BY_ITEM_WK                         |
| INVENTORY TRANSFER BY<br>SUBCLASS DAY AGGR  | DWA_INV_TRNSFR_BY_SBC_DAY                         |
| INVENTORY TRANSFER BY<br>SUBCLASS WEEK AGGR | DWA_INV_TRNSFR_BY_SBC_WK                          |
| INVENTORY TYPE                              | DWL_INV_TYP (View)                                |
| INVENTORY UNAVAILABLE BY<br>ITEM DAY        | DWD_INV_UNAVL_BY_ITEM_DAY                         |
| INVENTORY VENDOR<br>COMPLIANCE AGGR         | DWA_INV_VNDR_CMPLNC                               |
| ISSUE TYPE                                  | DWL_ISSUE_TYP (View)                              |
| ITEM  | DWR_ITEM  |
| ITEM CATEGORY                               | DWR_ITEM_CTGRY                                    |
| ITEM CLASS                                  | DWR_ITEM_CLASS                                    |
| ITEM CLUSTER                                | DWR_ITEM_CLSTR                                    |
| ITEM CLUSTER CUSTOMER<br>ASSIGNMENT         | DWR_ITEM_CLSTR_CUST_ASGNMNT                       |
| ITEM DEPARTMENT                             | DWR_ITEM_DEPT                                     |
| ITEM DIVISION                               | DWR_ITEM_DIV                                      |
| ITEM GROUP                                  | DWR_ITEM_GRP                                      |
| ITEM HIERARCHY                              | DWR_ITEM_HRCHY                                    |
| ITEM HIERARCHY LEVEL                        | DWR_ITEM_HRCHY_LVL                                |
| ITEM HIERARCHY LEVEL<br>ASSIGNMENT          | DWR_ITEM_HRCHY_LVL_ASGNMNT                        |
| ITEM HIERARCHY VERSION                      | DWR_ITEM_HRCHY_VRSN                               |
| ITEM LEVEL                                  | DWR_ITEM_LVL                                      |
| ITEM LEVEL ATTRIBUTE                        | DWR_ITEM_LVL_ATTR                                 |
| ITEM LEVEL ATTRIBUTE VALUE                  | DWR_ITEM_LVL_ATTR_VAL                             |
| ITEM MARKET DATA                            | DWR_ITEM_MKT_DATA                                 |
| ITEM SALES PROHIBITION PERIOD<br>RULE       | Subentity of SALES RESTRICTION (Reference Entity) |
| ITEM SEASON                                 | DWR_ITEM_SEASON                                   |
| ITEM SELLING RULE                           | DWR_ITEM_SLNG_RULE                                |
| ITEM SHELF LABEL                            | DWR_ITEM_SHELF_LABEL                              |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                     | <b>Table or View</b>                              |
|-----------------------------------|---|
| ITEM SPIFF RULE                   | DWR_ITEM_SPIFF_RULE                               |
| ITEM STATE                        | DWL_ITEM_STATE (View)                             |
| ITEM SUBCLASS                     | DWR_ITEM_SBC                                      |
| ITEM SUBDEPARTMENT                | DWR_ITEM_SBDEPT                                   |
| ITEM TENDER RESTRICTION GROUP     | DWR_ITEM_TNDR_RSTRCT_GRP                          |
| ITEM TENDER RESTRICTION RULE      | DWR_ITEM_TNDR_RSTRCT_RULE                         |
| JOB ROLES                         | DWR_JB_RL   |
| LANGUAGE                          | DWL_LANG (View)                                   |
| LICENSE SALES RESTRICTION         | Subentity of SALES RESTRICTION (Reference Entity) |
| LOCAL AUTHORITY TYPE              | DWL_LCL_AUTH_TYP (View)                           |
| LOCAL TAX AUTHORITY               | DWR_LCL_TAX_AUTH                                  |
| LOCATION TYPE                     | DWL_LOC_TYP (View)                                |
| LOYALTY AWARD                     | DWR_LYLTY_AWARD                                   |
| MANUFACTURAR COUPON TENDER        | DWB_MNFCTR_CPN_TNDR                               |
| MANUFACTURER                      | DWR_MNFCTR  |
| MANUFACTURER COUPON FAMILY        | DWL_MNFCTR_CPN_FMLY                               |
| MARKET AREA                       | DWR_MKT_AREA                                      |
| MARKET AREA LEVEL                 | DWR_MKT_AREA_LVL                                  |
| MARKET ITEM DEPARTMENT            | DWR_MKT_ITEM_DEPT                                 |
| MARKET ITEM DEPARTMENT ASSIGNMENT | DWR_MKT_ITEM_DEPT_ASGNMNT                         |
| MARKET SALES DEPARTMENT WEEK AGGR | DWA_MKT_SLS_DEPT_WK                               |
| MARKET SALES ITEM WEEK            | DWB_MKT_SLS_ITEM_WK                               |
| MEDIA                             | DWR_MEDIA   |
| MEDIA DEPICTION ITEM ASSIGNMENT   | DWR_MEDIA_DPCT_ITEM_ASGNMNT                       |
| MEDIA TYPE                        | DWL_MEDIA_TYP                                     |
| MEMBERSHIP ACCOUNT                | DWR_MBRSHIP_ACCT                                  |
| MEMBERSHIP TYPE                   | DWL_MBRSHIP_TYP (View)                            |
| MINUTE                            | DWR_MNT   |
| MISCELLANEOUS LINE ITEM TYPE      | DWI_MISC_LI_TYP (View)                            |
| MONTH TODATE TRANSFORMATION       | DWR_MO_TODATE_TRANS                               |
| MONTH TRANSFORMATION              | DWR_MO_TRANS                                      |
| MULTIPLE TENDER CLASS             | DWL_MLTP_L_TNDR_CLASS (View)                      |
| ORDER CATEGORY TYPE               | DWL_ORDR_CTGRY_TYP (View)                         |

**Table 4-1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                           | <b>Table or View</b>  |
|---|---|
| ORDER DOCUMENT                          | DWB_ORDR_DOC  |
| ORDER EVENT TYPE                        | DWL_ORDR_EVNT_TYP (View)                                      |
| ORDER LINE ITEM STATE                   | DWL_ORDR_LINE_ITEM_STATE (View)                               |
| ORDER SOURCE TYPE                       | DWL_ORDR_SRC_TYP (View)                                       |
| ORDER STATE                             | DWL_ORDR_STATE (View)   |
| ORDER STATUS                            | DWL_ORDR_STATUS   |
| ORDER STATUS TYPE                       | DWL_ORDR_STATUS_TYP   |
| ORDER TYPE                              | DWL_ORDR_TYP (View)   |
| ORGANIZATION AREA                       | DWR_ORG_AREA  |
| ORGANIZATION BANNER                     | DWR_ORG_BNR   |
| ORGANIZATION BUSINESS ENTITY            | DWR_ORG_BSNS_ENT  |
| ORGANIZATION BUSINESS UNIT              | DWR_ORG_BSNS_UNIT   |
| ORGANIZATION CATALOGUE                  | Subentity of ORGANIZATION BUSINESS UNIT<br>(Reference Entity) |
| ORGANIZATION CHAIN                      | DWR_ORG_CHAIN   |
| ORGANIZATION DEMOGRAPHY VALUE           | DWR_ORG_DEMOG_VAL   |
| ORGANIZATION DEPARTMENT                 | DWR_ORG_DEPT  |
| ORGANIZATION DISTRIBUTION CENTER        | Subentity of ORGANIZATION BUSINESS UNIT<br>(Reference Entity) |
| ORGANIZATION DISTRICT                   | DWR_ORG_DSTRCT  |
| ORGANIZATION DIVISION                   | DWR_ORG_DIV   |
| ORGANIZATION HIERARCHY                  | DWR_ORG_HRCHY   |
| ORGANIZATION HIERARCHY LEVEL            | DWR_ORG_HRCHY_LVL   |
| ORGANIZATION HIERARCHY LEVEL ASSIGNMENT | DWR_ORG_HRCHY_LVL_ASGNMNT                                     |
| ORGANIZATION HIERARCHY VERSION          | DWR_ORG_HRCHY_VRSN  |
| ORGANIZATION LEVEL                      | DWR_ORG_LVL   |
| ORGANIZATION LEVEL ATTRIBUTE VALUE      | DWR_ORG_LVL_ATTR_VAL  |
| ORGANIZATION LEVEL ATTRIBUTES           | DWR_ORG_LVL_ATTR  |
| ORGANIZATION MARKET DATA                | DWR_ORG_MKT_DATA  |
| ORGANIZATION REGION                     | DWR_ORG_RGN   |
| ORGANIZATION STORE                      | Subentity of ORGANIZATION BUSINESS UNIT<br>(Reference Entity) |
| ORGANIZATION WAREHOUSE                  | Subentity of ORGANIZATION BUSINESS UNIT<br>(Reference Entity) |
| ORGANIZATION WEB STORE                  | Subentity of ORGANIZATION BUSINESS UNIT<br>(Reference Entity) |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                         | <b>Table or View</b>                     |
|---------------------------------------|--|
| PACKING SLIP                          | DWB_PACKING_SLIP                         |
| PAY CATEGORY                          | DWL_PAY_CTGRY (View)                     |
| PAY DETAIL                            | DWR_PAY_DTL                              |
| PAY TYPE                              | DWL_PAY_TYP                              |
| PAYMENT ON ACCOUNT                    | DWB_PYMT_ON_ACCT                         |
| PERIOD TODATE TRANSFORMATION          | DWR_PERIOD_TODATE_TRANS                  |
| PERIOD TRANSFORMATION                 | DWR_PERIOD_TRANS                         |
| PERSONAL ID REQUIRED TYPE             | DWL_PRSNL_ID_REQD_TYP (View)             |
| PHASE                                 | DWR_PHS                                  |
| PLANNING PERIOD                       | DWR_PLNG_PERIOD                          |
| PLANNING QUARTER                      | DWR_PLNG_QTR                             |
| PLANNING SEASON                       | DWR_PLNG_SEASON                          |
| PLANNING SEASON WEEK ASSIGNMENT       | DWR_PLNG_SEASON_WK_ASGNMNT               |
| PLANNING WEEK                         | DWR_PLNG_WK                              |
| PLANNING YEAR                         | DWR_PLNG_YR                              |
| POS CONTROL                           | DWD_POS_CNTRL                            |
| POS DEPARTMENT                        | DWR_POS_DEPT                             |
| POS IDENTITY                          | DWR_POS_IDNT                             |
| POS RETAIL                            | DWD_POS_RTL                              |
| POS STORE FINANCIAL                   | DWD_POS_STORE_FINCL                      |
| POS TENDER FLOW                       | DWD_POS_TNDR_FLOW                        |
| POS TYPE                              | DWL_POS_TYP                              |
| POST CODE                             | DWR_POSTCD                               |
| PREFERENCE TYPE                       | DWL_PREF_TYP (View)                      |
| PREPARED                              | Subentity of SKU ITEM (Reference Entity) |
| PRICE DERIVATION RULE                 | DWR_PRICE_DRVTN_RULE                     |
| PRICE LIST                            | DWL_PRICE_LST_TYP (View)                 |
| PRODUCT ENTITY                        | DWR_PROD_ENT                             |
| PROFILE INDIVIDUAL                    | Subentity of CUSTOMER (Reference Entity) |
| PROFILE ORGANIZATION                  | Subentity of CUSTOMER (Reference Entity) |
| PROFILE SOURCE                        | DWL_PRFL_SRC (View)                      |
| PROMOTION                             | DWR_PRMTN                                |
| PROMOTION COST CONTRIBUTION WEEK AGGR | DWA_PRMTN_COST_CNTRBTN_WK                |
| PROMOTION ITEM                        | DWB_PRMTN_ITM                            |
| PROMOTION MEDIA COST                  | DWB_PRMTN_MEDIA_COST                     |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                              | <b>Table or View</b>                     |
|--|--|
| PROMOTION PRICE DERIVATION                 | DWB_PRMTN_PRICE_DRVTN                    |
| PROMOTION SALES MARGIN<br>WEEK AGGR        | DWA_PRMTN_SLS_MRGN_WK                    |
| PROMOTION SELLING ITEM                     | DWR_PRMTN_SLNG_ITEM                      |
| PROMOTION TRIGGER TYPE                     | DWL_PRMTN_TRGR_TYP (View)                |
| PROSPECT                                   | DWR_PRSPCT                               |
| PROSPECT INDIVIDUAL                        | Subentity of PROSPECT (Reference Entity) |
| PROSPECT ORGANIZATION                      | Subentity of PROSPECT (Reference Entity) |
| PROSPECT QUICK FACTS                       | Subentity of PROSPECT (Reference Entity) |
| PROSPECT RESTRICTED INFO                   | DWR_PRSPCT_RSTRCT_INFO                   |
| PURCHASE ORDER                             | DWB_PCHSE_ORDR                           |
| PURCHASE ORDER LINE ITEM                   | DWB_PCHSE_ORDR_LI                        |
| PURCHASE ORDER LINE ITEM<br>STATE          | DWB_PCHSE_ORDR_LI_STATE                  |
| PURCHASE ORDER STATE                       | DWB_PCHSE_ORDR_STATE                     |
| QUARTER HOUR                               | DWR_QTR_HR                               |
| QUARTER TODATE<br>TRANSFORMATION           | DWR_QTR_TODATE_TRANS                     |
| QUARTER TRANSFORMATION                     | DWR_QTR_TRANS                            |
| REASON                                     | DWL_RSN                                  |
| REASON CATEGORY                            | DWL_RSN_CTGRY                            |
| RECEIVING DOCUMENT                         | DWB_RCVNG_DOC                            |
| REQUEST ORIGIN TYPE                        | DWL_RQST_ORIGIN_TYP (View)               |
| RESTRICTION VALIDATION<br>QUESTION         | DWR_RSTRCT_VALID_QUES                    |
| RETAIL MARK DOWN ITEM DAY<br>AGGR          | DWA_RTL_MRKDN_ITEM_DAY                   |
| RETAIL MARKDOWN<br>DEPARTMENT DAY AGGR     | DWA_RTL_MRKDN_DEPT_DAY                   |
| RETAIL MARKDOWN<br>DEPARTMENT WEEK AGGR    | DWA_RTL_MRKDN_DEPT_WK                    |
| RETAIL MARKDOWN ITEM WEEK<br>AGGR          | DWA_RTL_MRKDN_ITEM_WK                    |
| RETAIL SALE RETURN<br>DEPARTMENT DAY AGGR  | DWA_RTL_SL_RETRN_DEPT_DAY                |
| RETAIL SALE RETURN<br>DEPARTMENT WEEK AGGR | DWA_RTL_SL_RETRN_DEPT_WK                 |
| RETAIL SALE RETURN ITEM DAY<br>DERIVED     | DWD_RTL_SL_RETRN_ITEM_DAY                |
| RETAIL SALE RETURN ITEM<br>MONTH AGGR      | DWA_RTL_SL_RETRN_ITEM_MO                 |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                              | <b>Table or View</b>           |
|--|--------------------------------|
| RETAIL SALE RETURN ITEM WEEK AGGR          | DWA_RTL_SL_RETRN_ITEM_WK       |
| RETAIL SALE RETURN LINE ITEM               | DWB_RTL_SLS_RETRN_LINE_ITEM    |
| RETAIL SALE RETURN ORG HRCHY DAY AGGR      | DWA_RTL_SL_RETRN_ORG_HRCHY_DAY |
| RETAIL SALE RETURN PROMOTION LINE ITEM     | DWB_RTL_SL_RETRN_PRMTN_LI      |
| RETAIL SALE RETURN SUBCLASS DAY AGGR       | DWA_RTL_SL_RETRN_SBC_DAY       |
| RETAIL SALE RETURN SUBCLASS MONTH AGGR     | DWA_RTL_SL_RETRN_SBC_MO        |
| RETAIL SALE RETURN SUBCLASS WEEK AGGR      | DWA_RTL_SL_RETRN_SBC_WK        |
| RETAIL TENDER HISTORY                      | DWB_RTL_TNDR_HIST              |
| RETAIL TRANSACTION                         | DWB_RTL_TRX                    |
| RETAIL TRANSACTION ASSOCIATE ASSIGNMENT    | DWB_RTL_TRX ASSOCT_ASGNMNT     |
| RETAIL TRANSACTION EMP WORKSTATION AGGR    | DWA_RTL_TRX_EMP_WRKSTN         |
| RETAIL TRANSACTION MISCELLANEOUS LINE ITEM | DWB_RTL_TRX_MISC_LI            |
| RETAIL TRANSACTION TYPE                    | DWL_RTL_TRX_TYP (View)         |
| RETAIL TYPE                                | DWL_RTL_TYP (View)             |
| RETURN AND TRANSFER IN OUT DOCUMENT        | DWB_RETRN_TRNSFR_IN_OUT_DOC    |
| RETURN AUTHORIZATION REQUEST               | DWB_RETRN_ATHRZTN_RQST         |
| RETURN STATUS                              | DWL_RETRN_STATUS (View)        |
| RETURN TO VENDOR ITEM DAY DERIVED          | DWD_RTV_ITEM_DAY               |
| RFMP METHOD                                | DWL_RFMP_MTHD                  |
| ROLES HIERARCHY                            | DWR_RL_HRCHY                   |
| SALE OR RETURN ACTION                      | DWL_SL_OR_RETRN_ACTN (View)    |
| SALE WEIGHT OR UNIT COUNT                  | DWL_SL_WT_OR_UNIT_CNT (View)   |
| SALES FORECAST ITEM ORG HIERARCHY WEEK     | DWB_SL_FRCST_ITEM_ORG_HRCHY_WK |
| SALES PLAN ITEM ORG HIERARCHY WEEK         | DWB_SLS_PLAN_ITEM_ORG_HRCHY_WK |
| SALES RESTRICTION                          | DWR_SLS_RSTRCT                 |
| SEASON                                     | DWR_SEASON                     |
| SECURITY REQUIRED TYPE                     | DWL_SCRTY_REQD_TYP (View)      |
| SELLING LOCATION                           | DWR_SLNG_LOC                   |
| SELLING LOCATION TYPE                      | DWL_SLNG_LOC_TYP (View)        |

**Table 4-1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                          | <b>Table or View</b>                       |
|--|--|
| SELLING STATUS                         | DWL_SLNG_STATUS (View)                     |
| SERVICE SKU                            | Subentity of SKU ITEM (Reference Entity)   |
| SERVICE TERM                           | DWR_SRVC_TERM                              |
| SHIPMENT METHOD                        | DWL_SHPMNT_MTHD (View)                     |
| SHIPMENT PRIORITY                      | DWL_SHPMNT_PRIORITY (View)                 |
| SIZE                                   | DWL_SZ                                     |
| SIZE TYPE                              | DWL_SZ_TYP (View)                          |
| SKU ITEM                               | DWR_SKU_ITEM                               |
| SKU ITEM BUSINESS UNIT INVENTORY RULES | DWR_SKU_ITEM_BSNS_UNIT_INV_RL              |
| SKU ITEM BUSINESS UNIT SELLING PRICE   | DWR_SKU_ITEM_BU_SL_PRC                     |
| SKU ITEM CHOICE                        | DWR_SKU_ITEM_CHOICE                        |
| SKU ITEM COLLECTION                    | DWR_SKU_ITEM_COLLCTN                       |
| SKU ITEM CONSTRUCTION                  | DWR_SKU_ITEM_CONSTRUCTION                  |
| SKU ITEM SELLING PRICE                 | DWB_SKU_ITEM_SLNG_PRICE                    |
| SKU ITEM SELLING PRICE HISTORY         | DWR_SKU_ITEM_SLNG_PRICE_HIST               |
| SKU ITEM SHELF ATTRIBUTES              | DWR_SKU_ITEM_SHELF_ATTR                    |
| SKU ITEM STYLE                         | DWL_SKU_ITEM_STYLE (View)                  |
| SKU ITEM SUBSTITUTION                  | DWR_SKU_ITEM_SUB                           |
| SKU ITEM TYPE                          | DWL_SKU_ITEM_TYP (View)                    |
| SKU ITEM VARIETY ASSIGNMENT            | DWR_SKU_ITEM_VRTY_ASGNMNT                  |
| SKU ITEM WEIGHT                        | DWR_SKU_ITEM_WT                            |
| SPACE UTILIZATION DEPARTMENT DAY AGGR  | DWA_SPACE_UTLZTN_DEPT_DAY                  |
| SPACE UTILIZATION ITEM DAY DERIVED     | DWD_SPACE_UTLZTN_ITEM_DAY                  |
| STATUS                                 | DWR_STATUS                                 |
| STATUS REASON                          | DWL_STATUS_RSN (View)                      |
| STATUS TYPE                            | DWL_STATUS_TYP (View)                      |
| STOCK                                  | Subentity of SKU ITEM (Reference Entity)   |
| STOCK ITEM TYPE                        | DWL_STCK_ITEM_TYP (View)                   |
| STOCK LEDGER BY SUBCLASS MONTH AGGR    | DWA_STCK_LDGR_BY_SBC_MO                    |
| STOCK LEDGER BY SUBCLASS WEEK AGGR     | DWA_STCK_LDGR_BY_SBC_WK                    |
| STORE FINANCIAL LEDGER ACCOUNT         | DWL_STORE_FINCL_LDGR_ACCT                  |
| STORE SAFE                             | DWR_STORE_SAFE                             |
| STORE WORKSTATION                      | Subentity of TOUCHPOINT (Reference Entity) |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                          | <b>Table or View</b>  |
|--|---|
| TARGET                                 | Subentity of CAMPAIGN MESSAGE RENDERING<br>(Reference Entity) |
| TAX AUTHORITY                          | DWL_TAX_AUTH  |
| TAX EXEMPT CODE                        | DWR_TAX_EXMPT_CD  |
| TAX EXEMPTION                          | DWL_TAX_EXMPTN  |
| TAXABLE GROUP                          | DWL_TAXBL_GRP   |
| TENDER                                 | DWR_TNDR  |
| TENDER CHANGE LINE ITEM                | DWB_TNDR_CHNG_LI  |
| TENDER CLASS                           | DWL_TNDR_CLASS (View)   |
| TENDER REPOSITORY                      | DWR_TNDR_RPSTRY   |
| TENDER REPOSITORY CLASS                | DWL_TNDR_RPSTRY_CLASS (View)                                  |
| TENDER TYPE                            | DWL_TNDR_TYP  |
| TERM CODE                              | DWL_TERM_CD   |
| TERMS MASTER                           | DWR_TRMS_MASTER   |
| THEFT TYPE                             | DWL_THEFT_TYP (View)  |
| TILL                                   | DWD_TILL  |
| TILL HISTORY                           | DWB_TILL_HIST   |
| TILL HISTORY WORKSTATION<br>AGGR       | DWA_TILL_HIST_WRKSTN  |
| TILL TAX HISTORY                       | DWB_TILL_TAX_HIST   |
| TILL TENDER HISTORY                    | DWB_TILL_TNDR_HIST  |
| TILL TENDER HISTORY EMPLOYEE<br>AGGR   | DWA_TILL_TNDR_HIST_EMP  |
| TIME PLANNING SEASON TODATE<br>BY WEEK | DWR_TIME_PLNG_SEASON_TD_BY_WK                                 |
| TIME STANDARD BY DAY                   | DWR_TIME_STNDRD_BY_DAY  |
| TIME STANDARD BY WEEK                  | DWR_TIME_STNDRD_BY_WK   |
| TIME ZONE                              | DWL_TIME_ZN   |
| TOTAL TYPE                             | DWL_TOTAL_TYP (View)  |
| TOUCHPOINT                             | DWR_TCHPNT  |
| TRADE AREA                             | DWR_TRD_AREA  |
| TRADE AREA COVERAGE                    | DWR_TRD_AREA_COVRG  |
| TRADE IN TENDER                        | DWB_TRD_IN_TNDR   |
| TRANSACTION TYPE                       | DWL_TRX_TYP   |
| TRANSFER TYPE                          | DWL_TRNSFR_TYP (View)   |
| UNIT OF MEASURE                        | DWL_UOM   |
| UOM CONVERSION                         | DWI_UOM_CNVRSN  |
| USER                                   | DWR_USERS   |

**Table 4-1 (Cont.) Entity Mapping Table**

| <b>Entity</b>                        | <b>Table or View</b>                        |
|--------------------------------------|---|
| VALIDATION QUESTION ASSIGNMENT       | DWR_VALID_QUES_ASGNMNT                      |
| VALUE MEASURE                        | DWR_VAL_MSR                                 |
| VALUE TYPE                           | DWL_VAL_TYP (View)                          |
| VARIETY                              | DWR_VRTY                                    |
| VARIETY TYPE                         | DWL_VRTY_TYP (View)                         |
| VENDOR                               | DWR_VNDR                                    |
| VENDOR APPOINTMENT                   | DWR_VNDR_APNMNT                             |
| VENDOR AVAILABILITY ITEM DAY AGGR    | DWA_VNDR_AVLBLTY_ITEM_DAY AGGR              |
| VENDOR CARRIER ASSIGNMENT            | DWR_VNDR_CARRIER_ASGNMNT                    |
| VENDOR CLASS                         | DWL_VNDR_CLASS (View)                       |
| VENDOR COMPLIANCE ITEM WEEK AGGR     | DWA_VNDR_CMPLNC_ITEM_WK AGGR                |
| VENDOR COMPLIANCE WEEK AGGR          | DWA_VNDR_CMPLNC_WK AGGR                     |
| VENDOR CONTRACT                      | DWR_VNDR_CNTRCT                             |
| VENDOR CONTRACT ITEM DAY AGGR        | DWA_VNDR_CNTRCT_ITEM_DAY AGGR               |
| VENDOR FACTOR COMPANY ASSIGNMENT     | DWR_VNDR_FCTR_CMPNY_ASGNMNT                 |
| VENDOR ITEM                          | DWR_VNDR_ITEM                               |
| VENDOR ITEM BUSINESS UNIT ASSIGNMENT | DWR_VNDR_ITEM_BSNS_UNIT_ASGN                |
| VENDOR ITEM SKU ASSIGNMENT           | DWR_VNDR_ITEM_SKU_ASGNMNT                   |
| VENDOR MANUFACTURER BRAND            | DWR_VNDR_MNFCTR_BRAND                       |
| VENDOR QUICK FACTS                   | Subentity of VENDOR ITEM (Reference Entity) |
| VENDOR RATING                        | DWR_VNDR_RTNG                               |
| VENDOR RATING TYPE                   | DWL_VNDR_RTNG_TYP (View)                    |
| VENDOR SITE                          | DWR_VNDR_SITE                               |
| VENDOR SITE ADDRESS                  | DWR_VNDR_SITE_ADDR                          |
| VENDOR SITE CARRIER ASSIGNMENT       | DWR_VNDR_CARRIER_ASGNMNT                    |
| VENDOR SKU BUSINESS UNIT ASSIGNMENT  | DWR_VNDR_SKU_BSNS_UNIT_ASGNMNT              |
| VENDOR SKU COST PROFIT DAY           | DWB_VNDR_SKU_COST_PRFT_DAY                  |
| VENDOR STATUS                        | DWR_VNDR_STATUS                             |
| WEAVE                                | DWL_WEAVE (View)                            |
| WEEK                                 | DWR_WK                                      |
| WEEK TODATE TRANSFORMATION           | DWR_WK_TODATE_TRANS                         |

**Table 4–1 (Cont.) Entity Mapping Table**

| <b>Entity</b>             | <b>Table or View</b>      |
|---------------------------|---------------------------|
| WEEK TRANSFORMATION       | DWR_WK_TRANS              |
| WEEKDAY                   | DWR_WKDAY                 |
| WORK HOUR TYPE            | DWL_WRK_HR_TYP (View)     |
| WORK STATION DISPLAY      | DWR_WRKSTN_DISP           |
| WORKSTATION LOCATION TYPE | DWL_WRKSTN_LOC_TYP (View) |
| YEAR TRANSFORMATION       | DWR_YR_TRANS              |



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## ETL for the Oracle Retail Data Model

This chapter contains the following topics about the ETL for the relational model of Oracle Retail Data Model:

- [Introduction to Oracle Retail Data Model ETL](#)
- [PKG\\_INTRA\\_ETL\\_PROCESS](#)
- [Intra-ETL Packages for Populating Derived Tables](#)
- [Intra-ETL Scripts for Populating Aggregate Tables and Relational Materialized Views](#)

It also contains discussions about the ETL used for the optional components of Oracle Retail Data Model:

- [Data Mining Component ETL](#)
- [OLAP Component ETL](#)

### Introduction to Oracle Retail Data Model ETL

In the Oracle Retail Data Model relational model, reference and lookup tables store master, reference, and dimensional data; while base, derived, and aggregate tables store transaction and fact data at different granularities. Base tables store the transaction data at the lowest level of granularity, while derived and aggregate tables store consolidated and summary transaction data.

As with any data warehouse, you use Extract, Transform, and Load (ETL) operations to populate an Oracle Retail Data Model data warehouse. You perform ETL operations as three separate steps using three different types of ETL:

1. Source\_ETL process that extracts data from the source On-Line Transaction Processing (OLTP) system, transform that data, and loads the reference, lookup, and base tables Oracle Retail Data Model warehouse. Source-ETL is *not* provided with Oracle Retail Data Model. *You must write source-ETL processes yourself.*
2. Intra-ETL processes that populate the remaining Oracle Retail Data Model warehouse relational data structures. Intra-ETL does not access the OLTP data at all. All of the data that it extracts and transforms is located within the Oracle Retail Data Model warehouse. Intra-ETL processes are provided with the Oracle Retail Data Model and is processed in the following order:
  - a. Populate the derived and aggregate tables and materialized views with the data from the base, reference, and lookup tables. For information about these intra-ETL packages, see "[PKG\\_INTRA\\_ETL\\_PROCESS](#)" on page 5-2, "[Intra-ETL Packages for Populating Derived Tables](#)" on page 5-2 and

["Intra-ETL Scripts for Populating Aggregate Tables and Relational Materialized Views"](#) on page 5-7. .

- b. Populate the tables used for the data mining models. For more information on using this intra-ETL, see ["Data Mining Component ETL"](#) on page 5-28
- 3. SQL scripts that populate the OLAP cubes provided with Oracle Retail Data Model. These scripts define the OLAP cubes and populate these cubes with data extracted from the Oracle Retail Data Model relational tables and views. For more information on populating OLAP cubes in a Oracle Retail Data Model warehouse, see ["OLAP Component ETL"](#) on page 5-31.

**See:** For instructions for using the Intra-ETL and SQL scripts to populate an Oracle Retail Data Model data warehouse, see *Oracle Retail Data Model Operations Guide*.

## PKG\_INTRA\_ETL\_PROCESS

There are two ways that you can execute the Intra-ETL packages provided with Oracle Retail Data Model. The method you use depends on whether you answered "yes" or "no" to the question "Indicate if this installation will be used to store transaction level history" when you installed Oracle Retail Data Model:

- If you selected "yes" during installation, then Level0 is MV and you can execute the Intra-ETL using Oracle Warehouse Builder.
- If you selected "no" during installation, then Level0 is Table and you must explicitly execute the PKG\_INTRA\_ETL\_PROCESS Intra-ETL package.

The database package PKG\_INTRA\_ETL\_PROCESS is a complete Intra-ETL process composed of individual population programs (database packages and MV refresh scripts). This package includes the dependency of each individual program and executes them in the proper order.

The PKG\_INTRA\_ETL\_PROCESS.RUN procedure starts the Intra-ETL process. This procedure can be invoked manually, or by another process such as Source-ETL, or according to a predefined schedule such as Oracle Job Scheduling.

PKG\_INTRA\_ETL\_PROCESS.RUN does not accept parameters. This procedure calls other programs in the correct order to load the data for current day (according to the Oracle system date). The result of each table loading are tracked in DWC\_control tables.

**See:** For instructions for populating an Oracle Retail Data Model data warehouse using the Intra-ETL, see *Oracle Retail Data Model Operations Guide*.

## Intra-ETL Packages for Populating Derived Tables

The Intra-ETL packages for populating derived tables are located at

`ORACLE_HOME/ORDM/PDM/Relational/Intra_ETL/Derived`

[Table 5–1](#) lists the Intra-ETL packages for populating tables and provides links to more detailed information about each package.

**Table 5–1 Intra-ETL Scripts for Database Packages**

| SI Number | Package Name                                      |
|-----------|---|
| 1         | <a href="#">PKG_DWD_SPACE_UTLZTN_ITEM_DAY.sql</a> |

**Table 5–1 (Cont.) Intra-ETL Scripts for Database Packages**

| SI Number | Package Name                       |
|-----------|------------------------------------|
| 2         | PKG_DWD_CUST_EMP_RLTNSHP_DAY.sql   |
| 3         | PKG_DWD_CUST_SKU_SL_RETRN_DAY.sql  |
| 4         | PKG_DWD_INV_UNAVL_BY_ITEM_DAY.sql  |
| 5         | PKG_DWD_INV_ADJ_BY_ITEM_DAY.sql    |
| 6         | PKG_DWD_INV_POSN_BY_ITEM_DAY.sql   |
| 7         | PKG_DWD_CUST_ORDR_LI_STATE.sql     |
| 8         | PKG_DWD_CERTIFICATE_ACTVTY_TRX.sql |
| 9         | PKG_DWD_POS_CNTRL.sql              |
| 10        | PKG_DWD_CTLG_RQST_BY_DAY.sql       |
| 11        | PKG_DWD_POS_RTL.sql                |
| 12        | PKG_DWD_RTV_ITEM_DAY.sql           |
| 13        | PKG_DWD_CUST_ORDR_ITEM_DAY.sql     |
| 14        | PKG_DWD_POS_STORE_FINCL.sql        |
| 15        | PKG_DWD_RTL_SL_RETRN_ITEM_DAY.sql  |
| 16        | PKG_DWD_POS_TNDR_FLOW.sql          |
| 17        | PKG_INTRA_ETL_PROCESS.sql          |
| 18        | PKG_INTRA_ETL_UTIL.sql             |

The Derived tables are described in "Derived Tables" on page 3-32.

### **PKG\_DWD\_SPACE\_UTLZTN\_ITEM\_DAY.sql**

(SI Number 1) The Intra-ETL Package for the population of DWD\_SPACE\_UTLZTN\_ITEM\_DAY.

#### **Source Tables**

DWB\_RTL\_SLS\_RETRN\_LINE\_ITEM  
DWR\_SLNG\_LOC, DWB\_DISC\_LI

#### **Target Table**

DWD\_SPACE\_UTLZTN\_ITEM\_DAY

### **PKG\_DWD\_CUST\_EMP\_RLTNSHP\_DAY.sql**

(SI Number 2) The Intra-ETL Package for the population of DWD\_CUST\_EMP\_RLTNSHP\_DAY.

#### **Source Table**

DWB\_RTL\_SLS\_RETRN\_LINE\_ITEM

#### **Target Table**

DWD\_CUST\_EMP\_RLTNSHP\_DAY

## **PKG\_DWD\_CUST\_SKU\_SL\_RETRN\_DAY.sql**

(SI Number 3) The Intra-ETL Package for the population of DWD\_CUST\_SKU\_SL\_RETRN\_DAY.

### **Source Tables**

DWB\_RTL\_SLS\_RETRN\_LINE\_ITEM  
DWB\_CUST\_ORDR\_LI, DWR\_USERS  
DWR\_CUST, DWR\_CUST\_RSTRCTD\_INFO  
DWR\_DAY

### **Target Table**

DWD\_CUST\_SKU\_SL\_RETRN\_DAY

## **PKG\_DWD\_INV\_UNAVL\_BY\_ITEM\_DAY.sql**

(SI Number 4) Intra-ETL Package for the population of DWD\_INV\_UNAVL\_BY\_ITEM\_DAY.

### **Source Tables**

DWB\_INV\_ITEM\_STATE  
DWR\_SKU\_ITEM\_SLNG\_PRICE  
DWR\_SKU\_ITEM, DWR\_DAY

### **Target Table**

DWD\_INV\_UNAVL\_BY\_ITEM\_DAY

## **PKG\_DWD\_INV\_ADJ\_BY\_ITEM\_DAY.sql**

(SI Number 5) The Intra-ETL Package for the population of DWD\_INV\_ADJ\_BY\_ITEM\_DAY.

### **Source Tables**

DWB\_INV\_ITEM\_STATE  
DWR\_SKU\_ITEM\_SLNG\_PRICE  
DWR\_SKU\_ITEM, DWR\_DAY

### **Target Table**

DWD\_INV\_ADJ\_BY\_ITEM\_DAY

## **PKG\_DWD\_INV\_POSN\_BY\_ITEM\_DAY.sql**

(SI Number 6) The Intra-ETL Package for the population of DWD\_INV\_POSN\_BY\_ITEM\_DAY.

### **Source Tables**

DWB\_INV\_ITEM\_STATE  
DWR\_DAY  
DWB\_INV\_CNTRL\_DOC\_LI  
DWB\_INV\_CNTRL\_DOC  
DWR\_SKU\_ITEM  
DWR\_SKU\_ITEM\_SLNG\_PRICE

**Target Table**

DWD\_INV\_POSN\_BY\_ITEM\_DAY

**PKG\_DWD\_CUST\_ORDR\_LI\_STATE.sql**

(SI Number 7) The Intra-ETL Package for the population of DWD\_CUST\_ORDR\_LI\_STATE.

**Source Tables**DWB\_CUST\_ORDR\_LI  
DWB\_CUST\_ORDR\_LI\_STATE\_ASSIGN**Target Table**

DWD\_CUST\_ORDR\_LI\_STATE

**PKG\_DWD\_CERTIFICATE\_ACTVTY\_TRX.sql**

(SI Number 8) The Intra-ETL Package for the population of DWD\_CERTIFICATE\_ACTVTY\_TRX.

**Source Table**

DWB\_RTL\_TNDR\_LI

**Target Table**

DWD\_CERTIFICATE\_ACTVTY\_TRX

**PKG\_DWD\_POS\_CNTRL.sql**

(SI Number 9) The Intra-ETL Package for the population of DWD\_POS\_CNTRL.

**Source Tables**DWB\_TILL\_HIST  
DWB\_RTL\_TRX  
DWR\_EMP  
DWB\_TILL\_TNDR\_HIST**Target Table**

DWD\_POS\_CNTRL

**PKG\_DWD\_CTLG\_RQST\_BY\_DAY.sql**

(SI Number 10) The Intra-ETL Package for the population of DWD\_CTLG\_RQST\_BY\_DAY.

**Source Tables**DWB\_RTL\_SLS\_RETRN\_LINE\_ITEM  
DWR\_ORG\_BSNS\_UNIT**Target Table**

DWD\_CTLG\_RQST\_BY\_DAY

## **PKG\_DWD\_POS\_RTL.sql**

(SI Number 11) The Intra-ETL Package for the population of DWD\_POS\_RTL.

### **Source Tables**

DWB\_TILL\_HIST  
DWB\_RTL\_TRX,DWR\_EMP

### **Target Table**

DWD\_POS\_RTL

## **PKG\_DWD\_RTV\_ITEM\_DAY.sql**

(SI Number 12) The Intra-ETL Package for the population of DWD\_RTV\_ITEM\_DAY.

### **Source Tables**

DWB\_PCHSE\_ORDR\_LI  
DWR\_DAY  
DWB\_PCHSE\_ORDR\_LI\_STATE

### **Target Table**

DWD\_RTV\_ITEM\_DAY

## **PKG\_DWD\_CUST\_ORDR\_ITEM\_DAY.sql**

(SI Number 13) Intra-ETL Package for the population of DWD\_CUST\_ORDR\_ITEM\_DAY.

### **Source Tables**

DWB\_CUST\_ORDR\_LI  
DWB\_CUST\_ORDR\_LI\_STATE\_ASSIGN  
DWR\_DAY

### **Target Table**

DWD\_CUST\_ORDR\_ITEM\_DAY

## **PKG\_DWD\_POS\_STORE\_FINCL.sql**

(SI Number 14) The Intra-ETL Package for the population of DWD\_POS\_STORE\_FINCL.

### **Source Tables**

DWB\_TILL\_TNDR\_HIST  
DWB\_TILL\_HIST  
DWB\_RTL\_TRX,DWR\_EMP

### **Target Table**

DWD\_POS\_STORE\_FINCL

## **PKG\_DWD\_RTL\_SL\_RETRN\_ITEM\_DAY.sql**

(SI Number 15) The Intra-ETL Package for the population of DWD\_RTL\_SL\_RETRN\_ITEM\_DAY.

**Source Tables**

DWB\_RTL\_SLS\_RETRN\_LINE\_ITEM  
DWB\_DISC\_LI

**Target Table**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY

**PKG\_DWD\_POS\_TNDR\_FLOW.sql**

(SI Number 16) The Intra-ETL Package for the population of DWD\_POS\_TNDR\_FLOW.

**Source Tables**

DWB\_RTL\_TNDR\_LI  
DWB\_RTL\_TRX,DWR\_EMP

**Target Table**

DWD\_POS\_TNDR\_FLOW

**PKG\_INTRA\_ETL\_PROCESS.sql**

(SI Number 17) The Intra-ETL process execution package. It populates all the derived and aggregate tables.

**PKG\_INTRA\_ETL\_UTIL.sql**

(SI Number 18) The Intra-ETL utility package.

During population of derived and aggregate tables, the package insert one row into DWC\_INTRA\_ETL\_ACTIVITY table for each derived and aggregate table to keep the track of that table.

**Intra-ETL Scripts for Populating Aggregate Tables and Relational Materialized Views**

The relational materialized view scripts are at the following locations:

- Relational materialized view creation scripts are located at *ORACLE\_HOME/ORDM/PDM/Install/Schema\_Script/DDL (Normal, with-Partition-Tablespace, With-Tablespace-only) /MV*
- Relational materialized view log creation scripts are located at *ORACLE\_HOME/ORDM/PDM/Install/Schema\_Script/DDL (Normal, with-Partition-Tablespace, With-Tablespace-only) /MVLog*
- Aggregate view scripts are located at *ORACLE\_HOME/ORDM/PDM/Install/Schema\_Script/DDL (Normal, with-Partition-Tablespace, With-Tablespace-only) /AggrView*

Table 5–2 lists the relational materialized view scripts delivered with Oracle Retail Data Model and provides links to more detailed information about each script.

**Table 5–2 Relational Materialized View Scripts**

| SI Number | Relational Materialized View Creation Script    |
|-----------|---|
| 1         | <a href="#">DWA_CUST_EMP_SL_RETRN_WK_MV.sql</a> |

**Table 5–2 (Cont.) Relational Materialized View Scripts**

| <b>SI Number</b> | <b>Relational Materialized View Creation Script</b> |
|------------------|---|
| 2                | DWA_CUST_ORDR_ITEM_WK_MV.sql                        |
| 3                | DWA_CUST_ORDR_SBC_DAY_MV.sql                        |
| 4                | DWA_INV_RCPT_BY_ITEM_WK_MV.sql                      |
| 5                | DWA_INV_RCPT_BY_SBC_DAY_MV.sql                      |
| 6                | DWA_INV_TRNSFR_BY_ITEM_WK_MV.sql                    |
| 7                | DWA_INV_TRNSFR_BY_SBC_DAY_MV.sql                    |
| 8                | DWA_RTL_MRKDN_ITEM_DAY_MV.sql                       |
| 9                | DWA_RTL_SL_RETRN_ITEM_WK_MV.sql                     |
| 10               | DWA_RTL_SL_RETRN_SBC_DAY_MV.sql                     |
| 11               | DWA_RTL_TRX_EMP_WRKSTN_MV.sql                       |
| 12               | DWA_SPACE_UTLZTN_DEPT_DAY_MV.sql                    |
| 13               | DWA_TILL_HIST_WRKSTN_MV.sql                         |
| 14               | DWA_TILL_TNDR_HIST_EMP_MV.sql                       |
| 15               | DWA_INV_POSN_BY_ITEM_WK_MV.sql                      |
| 16               | DWA_INV_POSN_BY_SBC_DAY_MV.sql                      |
| 17               | DWA_CERTIFICATE_ACTVTY_DAY_MV.sql                   |
| 18               | DWA_CARRIER_CMPLNC_WK_MV.sql                        |
| 19               | DWA_CUST_EMP_RLTNSHP_MO_MV.sql                      |
| 20               | DWA_INV_ITEM_STATE_HIST_WK_MV.sql                   |
| 21               | DWA_INV_RCPT_BY_ITEM_DAY_MV.sql                     |
| 22               | DWA_INV_TRNSFR_BY_ITEM_DAY_MV.sql                   |
| 23               | DWA_CUST_EMP_SL_RETRN_MO_MV.sql                     |
| 24               | DWA_CUST_ORDR_DEPT_DAY_MV.sql                       |
| 25               | DWA_CUST_ORDR_ITEM_MO_MV.sql                        |
| 26               | DWA_CUST_ORDR_SBC_WK_MV.sql                         |
| 27               | DWA_INV_RCPT_BY_SBC_WK_MV.sql                       |
| 28               | DWA_INV_TRNSFR_BY_SBC_WK_MV.sql                     |
| 29               | DWA_RTL_MRKDN_DEPT_DAY_MV.sql                       |
| 30               | DWA_RTL_MRKDN_ITEM_WK_MV.sql                        |
| 31               | DWA_RTL_SL_RETRN_DEPT_DAY_MV.sql                    |
| 32               | DWA_RTL_SL_RETRN_ITEM_MO_MV.sql                     |
| 33               | DWA_RTL_SL_RETRN_SBC_WK_MV.sql                      |
| 34               | DWA_INV_POSN_BY_SBC_WK_MV.sql                       |
| 35               | DWA_INV_POSN_BY_DEPT_DAY_MV.sql                     |
| 36               | DWA_RTL_SL_RT_ORG_HRCHY_DAY_MV.sql                  |
| 37               | DWA_RTL_MRKDN_DEPT_WK_MV.sql                        |
| 38               | DWA_RTL_SL_RETRN_DEPT_WK_MV.sql                     |

**Table 5–2 (Cont.) Relational Materialized View Scripts**

| SI Number | Relational Materialized View Creation Script     |
|-----------|--|
| 39        | <a href="#">DWA_RTL_SL_RETRN_SBC_MO_MV.sql</a>   |
| 40        | <a href="#">DWA_CUST_ORDR_SBC_MO_MV.sql</a>      |
| 41        | <a href="#">DWA_INV_POSN_BY_DEPT_WK_MV.sql</a>   |
| 42        | <a href="#">DWA_CERTIFICATE_ACTVTY_WK_MV.sql</a> |
| 43        | <a href="#">DWA_CUST_ORDR_DEPT_MO_MV.sql</a>     |
| 44        | <a href="#">DWA_MKT_SLS_DEPT_WK_MV.sql</a>       |
| 45        | <a href="#">DWA_INV_VNDR_CMPLNC_MV.sql</a>       |
| 46        | <a href="#">DWA_VNDR_CMPLNC_ITEM_WK_MV.sql</a>   |
| 47        | <a href="#">DWA_VNDR_CMPLNC_WK_MV.sql</a>        |

**See also:** ["Aggregate Tables and Relational Materialized Views"](#) on page 3-35.

### **DWA\_CUST\_EMP\_SL\_RETRN\_WK\_MV.sql**

(SI Number 1) Script for creation of DWA\_CUST\_EMP\_SL\_RETRN\_WK\_MV from DWD\_CUST\_SKU\_SL\_RETRN\_MV and DWV\_TIME\_DAY.

#### **Target Table**

DWA\_CUST\_EMP\_SL\_RETRN\_WK

#### **Source Tables**

DWD\_CUST\_SKU\_SL\_RETRN\_DAY  
DWR\_DAY

#### **Aggregate View Creation Script**

DWA\_CUST\_EMP\_SL\_RETRN\_WK.sql

#### **Relational Materialized View Log Creation Scripts**

DWD\_CUST\_SKU\_SL\_RETRN\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

### **DWA\_CUST\_ORDR\_ITEM\_WK\_MV.sql**

(SI Number 2) Script for creation of relational materialized view DWA\_CUST\_ORDR\_ITEM\_WK\_MV from DWD\_CUST\_ORDR\_ITEM\_DAY and DWV\_TIME\_DAY.

#### **Target Table**

DWA\_CUST\_ORDR\_ITEM\_WK

#### **Source Tables**

DWD\_CUST\_ORDR\_ITEM\_DAY  
DWR\_DAY

#### **Aggregate View Creation Script**

DWA\_CUST\_ORDR\_ITEM\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWD\_CUST\_ORDR\_ITEM\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

**DWA\_CUST\_ORDR\_SBC\_DAY\_MV.sql**

(SI Number 3) Script for creation of relational materialized view DWA\_CUST\_ORDR\_SBC\_DAY\_MV from DWD\_CUST\_ORDR\_ITEM\_DAY and DWR\_SKU\_ITEM.

**Target Table**

DWA\_CUST\_ORDR\_SBC\_DAY

**Source Tables**

DWD\_CUST\_ORDR\_ITEM\_DAY

DWR\_SKU\_ITEM

**Aggregate View Creation Script**

DWA\_CUST\_ORDR\_SBC\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWD\_CUST\_ORDR\_ITEM\_DAY\_MV\_LOG.sql

DWR\_SKU\_ITEM\_MV\_LOG.sql

**DWA\_INV\_RCPT\_BY\_ITEM\_WK\_MV.sql**

(SI Number 4) Script for creation of relational materialized view DWA\_INV\_RCPT\_BY\_ITEM\_WK\_MV from DWA\_INV\_RCPT\_BY\_ITEM\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_INV\_RCPT\_BY\_ITEM\_WK

**Source Tables**

DWA\_INV\_RCPT\_BY\_ITEM\_DAY

DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_RCPT\_BY\_ITEM\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_RCPT\_BY\_ITEM\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

**DWA\_INV\_RCPT\_BY\_SBC\_DAY\_MV.sql**

(SI Number 5) Script for creation of relational materialized view DWA\_INV\_RCPT\_BY\_SBC\_DAY\_MV from DWA\_INV\_RCPT\_BY\_ITEM\_DAY\_MV and DWR\_SKU\_ITEM.

**Target Table**

DWA\_INV\_RCPT\_BY\_SBC\_DAY

**Source Tables**

DWA\_INV\_RCPT\_BY\_ITEM\_DAY  
DWR\_SKU\_ITEM

**Aggregate View Creation Script**

DWA\_INV\_RCPT\_BY\_SBC\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_RCPT\_BY\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql

**DWA\_INV\_TRNSFR\_BY\_ITEM\_WK\_MV.sql**

(SI Number 6) Script for creation of relational materialized view DWA\_INV\_TRNSFR\_BY\_ITEM\_WK\_MV from DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_INV\_TRNSFR\_BY\_ITEM\_WK

**Source Tables**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY  
DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_TRNSFR\_BY\_ITEM\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

**DWA\_INV\_TRNSFR\_BY\_SBC\_DAY\_MV.sql**

(SI Number 7) Script for creation of relational materialized view DWA\_INV\_TRNSFR\_BY\_SBC\_DAY\_MV from DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY\_MV and DWR\_SKU\_ITEM.

**Target Table**

DWA\_INV\_TRNSFR\_BY\_SBC\_DAY

**Source Tables**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY  
DWR\_SKU\_ITEM

**Aggregate View Creation Script**

DWA\_INV\_TRNSFR\_BY\_SBC\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql

## **DWA\_RTL\_MRKDN\_ITEM\_DAY\_MV.sql**

(SI Number 8) Script for creation of relational materialized view DWA\_RTL\_MRKDN\_ITEM\_DAY\_MV from DWD\_RTL\_SL\_RETRN\_ITEM\_DAY.

### **Target Table**

DWA\_RTL\_MRKDN\_ITEM\_DAY

### **Source Table**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY

### **Aggregate View Creation Script**

DWA\_RTL\_MRKDN\_ITEM\_DAY.sql

### **Relational Materialized View Log Creation Script**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY\_MV\_LOG.sql

## **DWA\_RTL\_SL\_RETRN\_ITEM\_WK\_MV.sql**

(SI Number 9) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_ITEM\_WK\_MV from DWD\_RTL\_SL\_RETRN\_ITEM\_DAY and DWV\_TIME\_DAY.

### **Target Table**

DWA\_RTL\_SL\_RETRN\_ITEM\_WK

### **Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_DAY

### **Aggregate View Creation Script**

DWA\_RTL\_SL\_RETRN\_ITEM\_WK.sql

### **Relational Materialized View Log Creation Scripts**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

## **DWA\_RTL\_SL\_RETRN\_SBC\_DAY\_MV.sql**

(SI Number 10) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_SBC\_DAY\_MV from DWD\_RTL\_SL\_RETRN\_ITEM\_DAY and DWR\_SKU\_ITEM.

### **Target Table**

DWA\_RTL\_SL\_RETRN\_SBC\_DAY

### **Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_SKU\_ITEM

### **Aggregate View Creation Script**

DWA\_RTL\_SL\_RETRN\_SBC\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql

**DWA\_RTL\_TRX\_EMP\_WRKSTN\_MV.sql**

(SI Number 11) Script for creation of relational materialized view DWA\_RTL\_TRX\_EMP\_WRKSTN\_MV from DWB\_TILL\_HIST, DWV\_TIME\_DAY, DWB\_TILL\_TNDR\_HIST, DWD\_POS\_CNTRL, and DWD\_POS\_RTL.

**Target Table**

DWA\_RTL\_TRX\_EMP\_WRKSTN

**Source Tables**

DWB\_TILL\_HIST  
DWR\_DAY  
DWB\_TILL\_TNDR\_HIST  
DWD\_POS\_CNTRL  
DWD\_POS\_RTL

**Aggregate View Creation Script**

DWA\_RTL\_TRX\_EMP\_WRKSTN.sql

**Relational Materialized View Log Creation Scripts**

DWB\_TILL\_HIST\_MV\_LOG.sql  
DWB\_TILL\_TNDR\_HIST\_MV\_LOG.sql  
DWD\_POS\_CNTRL\_MV\_LOG.sql  
DWD\_POS\_RTL\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

**DWA\_SPACE\_UTLZTN\_DEPT\_DAY\_MV.sql**

(SI Number 12) Script for creation of relational materialized view DWA\_SPACE\_UTLZTN\_DEPT\_DAY\_MV from DWD\_SPACE\_UTLZTN\_ITEM\_DAY, DWR\_SKU\_ITEM, and DWR\_SEASON.

**Target Table**

DWA\_SPACE\_UTLZTN\_DEPT\_DAY

**Source Tables**

DWD\_SPACE\_UTLZTN\_ITEM\_DAY  
DWR\_SKU\_ITEM, DWR\_SEASON

**Aggregate View Creation Script**

DWA\_SPACE\_UTLZTN\_DEPT\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWD\_SPACE\_UTLZTN\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql  
DWR\_SEASON\_MV\_LOG.sql

## DWA\_TILL\_HIST\_WRKSTN\_MV.sql

(SI Number 13) Script for creation of relational materialized view DWA\_TILL\_HIST\_WRKSTN\_MV from DWB\_TILL\_HIST, DWV\_TIME\_DAY and DWR\_EMP.

### Target Table

DWA\_TILL\_HIST\_WRKSTN

### Source Tables

DWB\_TILL\_HIST  
DWV\_TIME\_DAY  
DWR\_EMP

### Aggregate View Creation Script

DWA\_TILL\_HIST\_WRKSTN.sql

### Relational Materialized View Log Creation Scripts

DWB\_TILL\_HIST\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql  
DWR\_EMP\_MV\_LOG.sql

## DWA\_TILL\_TNDR\_HIST\_EMP\_MV.sql

(SI Number 14) Script for creation of relational materialized view DWA\_TILL\_TNDR\_HIST\_EMP\_MV from DWB\_TILL\_TNDR\_HIST, DWR\_EMP, and DWR\_USERS.

### Target Table

DWA\_TILL\_TNDR\_HIST\_EMP

### Source Tables

DWB\_TILL\_TNDR\_HIST  
DWR\_EMP  
DWR\_USERS

### Aggregate View Creation Script

DWA\_TILL\_TNDR\_HIST\_EMP.sql

### Relational Materialized View Log Creation Scripts

DWB\_TILL\_TNDR\_HIST\_MV\_LOG.sql  
DWR\_EMP\_MV\_LOG.sql  
DWR\_USERS\_MV\_LOG.sql

## DWA\_INV\_POSN\_BY\_ITEM\_WK\_MV.sql

(SI Number 15) Script for creation of relational materialized view DWD\_INV\_POSN\_BY\_ITEM\_DAY and DWV\_TIME\_DAY.

### Target Table

DWA\_INV\_POSN\_BY\_ITEM\_WK

### Source Tables

DWD\_INV\_POSN\_BY\_ITEM\_DAY

DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_POSN\_BY\_ITEM\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWD\_INV\_POSN\_BY\_ITEM\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

**DWA\_INV\_POSN\_BY\_SBC\_DAY\_MV.sql**

(SI Number 16) Script for creation of relational materialized view DWA\_INV\_POSN\_BY\_ITEM\_DAY and DWR\_SKU\_ITEM.

**Target Table**

DWA\_INV\_POSN\_BY\_SBC\_DAY

**Source Tables**

DWD\_INV\_POSN\_BY\_ITEM\_DAY

DWR\_SKU\_ITEM

**Aggregate View Creation Script**

DWA\_INV\_POSN\_BY\_SBC\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWD\_INV\_POSN\_BY\_ITEM\_DAY\_MV\_LOG.sql

DWR\_SKU\_ITEM\_MV\_LOG.sql

**DWA\_CERTIFICATE\_ACTVTY\_DAY\_MV.sql**

(SI Number 17) Script for creation of relational materialized view DWA\_CERTIFICATE\_ACTVTY\_DAY\_MV from DWD\_CERTIFICATE\_ACTVTY\_TRX.

**Target Table**

DWA\_CERTIFICATE\_ACTVTY\_DAY

**Source Table**

DWD\_CERTIFICATE\_ACTVTY\_TRX

**Aggregate View Creation Script**

DWA\_CERTIFICATE\_ACTVTY\_DAY.sql

**Relational Materialized View Log Creation Script**

DWD\_CERTIFICATE\_ACTVTY\_TRX\_MV\_LOG.sql

**DWA\_CARRIER\_CMPLNC\_WK\_MV.sql**

(SI Number 18) Script for creation of relational materialized view DWA\_CARRIER\_CMPLNC\_WK\_MV from DWB\_INV\_CNTRL\_DOC, DWB\_INV\_CNTRL\_DOC\_LI, and DWV\_TIME\_DAY.

**Target Table**

DWA\_CARRIER\_CMPLNC\_WK

**Source Tables**

DWB\_INV\_CNTRL\_DOC  
DWB\_INV\_CNTRL\_DOC\_LI  
DWR\_DAY

**Aggregate View Creation Script**

DWA\_CARRIER\_CMPLNC\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWB\_INV\_CNTRL\_DOC\_MV\_LOG.sql  
DWB\_INV\_CNTRL\_DOC\_LI\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

**DWA\_CUST\_EMP\_RLTNSHP\_MO\_MV.sql**

(SI Number 19) Script for creation of relational materialized view DWA\_CUST\_EMP\_RLTNSHP\_MO\_MV from DWD\_CUST\_EMP\_RLTNSHP\_DAY, DWR\_CUST, and DWV\_TIME\_DAY.

**Target Table**

DWA\_CUST\_EMP\_RLTNSHP\_MO

**Source Tables**

DWD\_CUST\_EMP\_RLTNSHP\_DAY  
DWR\_DAY, DWR\_CUST

**Aggregate View Creation Script**

DWA\_CUST\_EMP\_RLTNSHP\_MO.sql

**Relational Materialized View Log Creation Scripts**

DWD\_CUST\_EMP\_RLTNSHP\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql  
DWR\_CUST\_MV\_LOG.sql

**DWA\_INV\_ITEM\_STATE\_HIST\_WK\_MV.sql**

(SI Number 20) Script for creation of relational materialized view DWA\_INV\_ITEM\_STATE\_HIST\_WK\_MV from DWB\_INV\_ITEM\_STATE and DWV\_TIME\_DAY.

**Target Table**

DWA\_INV\_ITEM\_STATE\_HIST\_WK

**Source Tables**

DWB\_INV\_ITEM\_STATE  
DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_ITEM\_STATE\_HIST\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWB\_INV\_ITEM\_STATE\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

**DWA\_INV\_RCPT\_BY\_ITEM\_DAY\_MV.sql**

(SI Number 21) Script for creation of relational materialized view DWA\_INV\_RCPT\_BY\_ITEM\_DAY\_MV from DWB\_INV\_CNTRL\_DOC\_LI, DWB\_INV\_CNTRL\_DOC, DWR\_SKU\_ITEM\_SLNG\_PRICE, DWR\_SKU\_ITEM, DWV\_TIME\_DAY, and DWR\_ITEM\_SEASON.

**Target Table**

DWA\_INV\_RCPT\_BY\_ITEM\_DAY

**Source Tables**

DWB\_INV\_CNTRL\_DOC\_LI  
DWB\_INV\_CNTRL\_DOC  
DWR\_SKU\_ITEM\_SLNG\_PRICE  
DWR\_SKU\_ITEM, DWR\_DAY  
DWR\_ITEM\_SEASON

**Aggregate View Creation Script**

DWA\_INV\_RCPT\_BY\_ITEM\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWB\_INV\_CNTRL\_DOC\_LI\_MV\_LOG.sql  
DWB\_INV\_CNTRL\_DOC\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_SLNG\_PRICE\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql  
DWR\_ITEM\_SEASON\_MV\_LOG.sql

**DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY\_MV.sql**

(SI Number 22) Script for creation of relational materialized view DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY\_MV from DWB\_INV\_CNTRL\_DOC\_LI, DWB\_INV\_CNTRL\_DOC, DWR\_SKU\_ITEM\_SLNG\_PRICE, DWR\_SKU\_ITEM, DWV\_TIME\_DAY and DWR\_ITEM\_SEASON.

**Target Table**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY

**Source Tables**

DWB\_INV\_CNTRL\_DOC  
DWB\_INV\_CNTRL\_DOC\_LI  
DWR\_DAY  
DWR\_SKU\_ITEM\_SLNG\_PRICE  
DWR\_SKU\_ITEM  
DWR\_ITEM\_SEASON

**Aggregate View Creation Script**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWB\_INV\_CNTRL\_DOC\_MV\_LOG.sql  
DWB\_INV\_CNTRL\_DOC\_LI\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_SLNG\_PRICE\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql  
DWR\_ITEM\_SEASON\_MV\_LOG.sql

**DWA\_CUST\_EMP\_SL\_RETRN\_MO\_MV.sql**

(SI Number 23) Script for creation of relational materialized view DWA\_CUST\_EMP\_SL\_RETRN\_MO\_MV from DWA\_CUST\_EMP\_SL\_RETRN\_WK\_MV and DWR\_BSNS\_WK.

**Target Table**

DWA\_CUST\_EMP\_SL\_RETRN\_MO

**Source Tables**

DWD\_CUST\_SKU\_SL\_RETRN\_DAY  
DWR\_DAY, DWR\_BSNS\_WK

**Aggregate View Creation Script**

DWA\_CUST\_EMP\_SL\_RETRN\_MO.sql

**Relational Materialized View Log Creation Scripts**

DWA\_CUST\_EMP\_SL\_RETRN\_WK\_MV\_LOG.sql  
DWR\_BSNS\_WK\_MV\_LOG.sql

**DWA\_CUST\_ORDR\_DEPT\_DAY\_MV.sql**

(SI Number 24) Script for creation of relational materialized view DWA\_CUST\_ORDR\_DEPT\_DAY\_MV from DWA\_CUST\_ORDR\_SBC\_DAY\_MV and DWR\_ITEM\_SBC.

**Target Table**

DWA\_CUST\_ORDR\_DEPT\_DAY

**Source Tables**

DWD\_CUST\_ORDR\_ITEM\_DAY  
DWR\_SKU\_ITEM  
DWR\_ITEM\_SBC

**Aggregate View Creation Script**

DWA\_CUST\_ORDR\_DEPT\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWA\_CUST\_ORDR\_SBC\_DAY\_MV\_LOG.sql  
DWR\_ITEM\_SBC\_MV\_LOG.sql

## DWA\_CUST\_ORDR\_ITEM\_MO\_MV.sql

(SI Number 25) Script for creation of relational materialized view DWA\_CUST\_ORDR\_ITEM\_MO\_MV from DWA\_CUST\_ORDR\_ITEM\_WK\_MV and DWV\_TIME\_BSNS\_WK.

### Target Table

DWA\_CUST\_ORDR\_ITEM\_MO

### Source Tables

DWD\_CUST\_ORDR\_ITEM\_DAY  
DWR\_DAY  
DWR\_BSNS\_WK

### Aggregate View Creation Script

DWA\_CUST\_ORDR\_ITEM\_MO.sql

### Relational Materialized View Log Creation Scripts

DWA\_CUST\_ORDR\_ITEM\_WK\_MV\_LOG.sql  
DWR\_BSNS\_WK\_MV\_LOG.sql

## DWA\_CUST\_ORDR\_SBC\_WK\_MV.sql

(SI Number 26) Script for creation of relational materialized view DWA\_CUST\_ORDR\_SBC\_WK\_MV from DWA\_CUST\_ORDR\_SBC\_DAY\_MV and DWV\_TIME\_DAY.

### Target Table

DWA\_CUST\_ORDR\_SBC\_WK

### Source Tables

DWD\_CUST\_ORDR\_ITEM\_DAY  
DWR\_SKU\_ITEM, DWR\_DAY

### Aggregate View Creation Script

DWA\_CUST\_ORDR\_SBC\_WK.sql

### Relational Materialized View Log Creation Scripts

DWA\_CUST\_ORDR\_SBC\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

## DWA\_INV\_RCPT\_BY\_SBC\_WK\_MV.sql

(SI Number 27) Script for creation of relational materialized view DWA\_INV\_RCPT\_BY\_SBC\_WK\_MV from DWA\_INV\_RCPT\_BY\_SBC\_DAY\_MV and DWV\_TIME\_DAY.

### Target Table

DWA\_INV\_RCPT\_BY\_SBC\_WK

### Source Tables

DWA\_INV\_RCPT\_BY\_ITEM\_DAY  
DWR\_SKU\_ITEM, DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_RCPT\_BY\_SBC\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_RCPT\_BY\_SBC\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

**DWA\_INV\_TRNSFR\_BY\_SBC\_WK\_MV.sql**

(SI Number 28) Script for creation of relational materialized view DWA\_INV\_TRNSFR\_BY\_SBC\_WK\_MV from DWA\_INV\_TRNSFR\_BY\_SBC\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_INV\_TRNSFR\_BY\_SBC\_WK

**Source Tables**

DWA\_INV\_TRNSFR\_BY\_ITEM\_DAY

DWR\_SKU\_ITEM

DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_TRNSFR\_BY\_SBC\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_TRNSFR\_BY\_SBC\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

**DWA\_RTL\_MRKDN\_DEPT\_DAY\_MV.sql**

(SI Number 29) Script for creation of relational materialized view DWA\_RTL\_MRKDN\_DEPT\_DAY\_MV from DWA\_RTL\_MRKDN\_ITEM\_DAY\_MV and DWR\_SKU\_ITEM.

**Target Table**

DWA\_RTL\_MRKDN\_DEPT\_DAY

**Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY

DWR\_SKU\_ITEM

**Aggregate View Creation Script**

DWA\_RTL\_MRKDN\_DEPT\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWA\_RTL\_MRKDN\_ITEM\_DAY\_MV\_LOG.sql

DWR\_SKU\_ITEM\_MV\_LOG.sql

## **DWA\_RTL\_MRKDN\_ITEM\_WK\_MV.sql**

(SI Number 30) Script for creation of relational materialized view DWA\_RTL\_MRKDN\_ITEM\_WK\_MV from DWA\_RTL\_MRKDN\_ITEM\_DAY\_MV and DWV\_TIME\_DAY.

### **Target Table**

DWA\_RTL\_MRKDN\_ITEM\_WK

### **Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWV\_TIME\_DAY

### **Aggregate View Creation Script**

DWA\_RTL\_MRKDN\_ITEM\_WK.sql

### **Relational Materialized View Log Creation Scripts**

DWA\_RTL\_MRKDN\_ITEM\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

## **DWA\_RTL\_SL\_RETRN\_DEPT\_DAY\_MV.sql**

(SI Number 31) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_DEPT\_DAY\_MV from DWA\_RTL\_SL\_RETRN\_SBC\_DAY\_MV and DWR\_ITEM\_SBC.

### **Target Table**

DWA\_RTL\_SL\_RETRN\_DEPT\_DAY

### **Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_SKU\_ITEM, DWR\_ITEM\_SBC

### **Aggregate View Creation Script**

DWA\_RTL\_SL\_RETRN\_DEPT\_DAY.sql

### **Relational Materialized View Log Creation Scripts**

DWA\_RTL\_SL\_RETRN\_SBC\_DAY\_MV\_LOG.sql  
DWR\_ITEM\_SBC\_MV\_LOG.sql

## **DWA\_RTL\_SL\_RETRN\_ITEM\_MO\_MV.sql**

(SI Number 32) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_ITEM\_MO\_MV from DWA\_RTL\_SL\_RETRN\_ITEM\_WK\_MV and DWV\_TIME\_BSNS\_WK.

### **Target Table**

DWA\_RTL\_SL\_RETRN\_ITEM\_MO

### **Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_DAY, DWR\_BSNS\_WK

**Aggregate View Creation Script**

DWA\_RTL\_SL\_RETRN\_ITEM\_MO.sql

**Relational Materialized View Log Creation Scripts**

DWA\_RTL\_SL\_RETRN\_ITEM\_WK\_MV\_LOG.sql

DWR\_BSNS\_WK\_MV\_LOG.sql

**DWA\_RTL\_SL\_RETRN\_SBC\_WK\_MV.sql**

(SI Number 33) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_SBC\_WK\_MV from DWA\_RTL\_SL\_RETRN\_ITEM\_WK\_MV and DWR\_SKU\_ITEM.

**Target Table**

DWA\_RTL\_SL\_RETRN\_SBC\_WK

**Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY

DWR\_DAY, DWR\_SKU\_ITEM

**Aggregate View Creation Script**

DWA\_RTL\_SL\_RETRN\_SBC\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_RTL\_SL\_RETRN\_ITEM\_WK\_MV\_LOG.sql

DWR\_SKU\_ITEM\_MV\_LOG.sql

**DWA\_INV\_POSN\_BY\_SBC\_WK\_MV.sql**

(SI Number 34) Script for creation of relational materialized view from DWA\_INV\_POSN\_BY\_SBC\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_INV\_POSN\_BY\_SBC\_WK

**Source Tables**

DWD\_INV\_POSN\_BY\_ITEM\_DAY

DWR\_SKU\_ITEM, DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_POSN\_BY\_SBC\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_POSN\_BY\_SBC\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

**DWA\_INV\_POSN\_BY\_DEPT\_DAY\_MV.sql**

(SI Number 35) Script for creation of relational materialized view DWA\_INV\_POSN\_BY\_DEPT\_DAY\_MV from DWA\_INV\_POSN\_BY\_SBC\_DAY\_MV and DWR\_ITEM\_SBC.

**Target Table**

DWA\_INV\_POSN\_BY\_DEPT\_DAY

**Source Tables**DWD\_INV\_POSN\_BY\_ITEM\_DAY  
DWR\_SKU\_ITEM**Aggregate View Creation Script**

DWA\_INV\_POSN\_BY\_DEPT\_DAY.sql

**Relational Materialized View Log Creation Scripts**DWA\_INV\_POSN\_BY\_SBC\_DAY\_MV\_LOG.sql  
DWR\_ITEM\_SBC\_MV\_LOG.sql**DWA\_RTL\_SL\_RT\_ORG\_HRCHY\_DAY\_MV.sql**

(SI Number 36) Script for creation of relational materialized view DWA\_RTL\_SL\_RT\_ORG\_HRCHY\_DAY\_MV from DWA\_RTL\_SL\_RETRN\_DEPT\_DAY\_MV.

**Target Table**

DWA\_RTL\_SL\_RT\_ORG\_HRCHY\_DAY

**Source Tables**DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_SKU\_ITEM, DWR\_ITEM\_SBC**Aggregate View Creation Script**

DWA\_RTL\_SL\_RT\_ORG\_HRCHY\_DAY.sql

**Relational Materialized View Log Creation Scripts**

DWA\_RTL\_SL\_RETRN\_DEPT\_DAY\_MV\_LOG.sql

**DWA\_RTL\_MRKDN\_DEPT\_WK\_MV.sql**

(SI Number 37) Script for creation of relational materialized view DWA\_RTL\_MRKDN\_DEPT\_WK\_MV from DWA\_RTL\_MRKDN\_DEPT\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_RTL\_MRKDN\_DEPT\_WK

**Source Tables**

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY, DWR\_SKU\_ITEM, DWR\_DAY

**Aggregate View Creation Script**

DWA\_RTL\_MRKDN\_DEPT\_WK.sql

**Relational Materialized View Log Creation Scripts**DWA\_RTL\_MRKDN\_DEPT\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

## DWA\_RTL\_SL\_RETRN\_DEPT\_WK\_MV.sql

(SI Number 38) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_DEPT\_WK\_MV from DWA\_RTL\_SL\_RETRN\_DEPT\_DAY\_MV and DWV\_TIME\_DAY.

### Target Table

DWA\_RTL\_SL\_RETRN\_DEPT\_WK

### Source Tables

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_SKU\_ITEM  
DWR\_ITEM\_SBC  
DWR\_DAY

### Aggregate View Creation Script

DWA\_RTL\_SL\_RETRN\_DEPT\_WK.sql

### Relational Materialized View Log Creation Scripts

DWA\_RTL\_SL\_RETRN\_DEPT\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

## DWA\_RTL\_SL\_RETRN\_SBC\_MO\_MV.sql

(SI Number 39) Script for creation of relational materialized view DWA\_RTL\_SL\_RETRN\_SBC\_MO\_MV from DWA\_RTL\_SL\_RETRN\_ITEM\_MO\_MV and DWR\_SKU\_ITEM.

### Target Table

DWA\_RTL\_SL\_RETRN\_SBC\_MO

### Source Tables

DWD\_RTL\_SL\_RETRN\_ITEM\_DAY  
DWR\_DAY  
DWR\_BSNS\_WK  
DWR\_SKU\_ITEM

### Aggregate View Creation Script

DWA\_RTL\_SL\_RETRN\_SBC\_MO.sql

### Relational Materialized View Log Creation Scripts

DWA\_RTL\_SL\_RETRN\_ITEM\_MO\_MV\_LOG.sql  
DWR\_SKU\_ITEM\_MV\_LOG.sql

## DWA\_CUST\_ORDR\_SBC\_MO\_MV.sql

(SI Number 40) Script for creation of relational materialized view DWA\_CUST\_ORDR\_SBC\_MO\_MV from DWA\_CUST\_ORDR\_SBC\_WK\_MV and DWV\_TIME\_BSNS\_WK.

### Target Table

DWA\_CUST\_ORDR\_SBC\_MO

**Source Tables**

DWD\_CUST\_ORDR\_ITEM\_DAY  
DWR\_SKU\_ITEM  
DWR\_DAY  
DWR\_BSNS\_WK

**Aggregate View Creation Script**

DWA\_CUST\_ORDR\_SBC\_MO.sql

**Relational Materialized View Log Creation Scripts**

DWA\_CUST\_ORDR\_SBC\_WK\_MV\_LOG.sql  
DWR\_BSNS\_WK\_MV\_LOG.sql

**DWA\_INV\_POSN\_BY\_DEPT\_WK\_MV.sql**

(SI Number 41) Script for creation of the relational materialized views DWA\_INV\_POSN\_BY\_DEPT\_WK\_MV from DWA\_INV\_POSN\_BY\_DEPT\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_INV\_POSN\_BY\_DEPT\_WK

**Source Tables**

DWD\_INV\_POSN\_BY\_ITEM\_DAY  
DWR\_SKU\_ITEM  
DWR\_ITEM\_SBC, DWR\_DAY

**Aggregate View Creation Script**

DWA\_INV\_POSN\_BY\_DEPT\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_INV\_POSN\_BY\_DEPT\_DAY\_MV\_LOG.sql  
DWR\_DAY\_MV\_LOG.sql

**DWA\_CERTIFICATE\_ACTVTY\_WK\_MV.sql**

(SI Number 42) Script for creation of relational materialized view DWA\_CERTIFICATE\_ACTVTY\_WK\_MV from DWA\_CERTIFICATE\_ACTVTY\_DAY\_MV and DWV\_TIME\_DAY.

**Target Table**

DWA\_CERTIFICATE\_ACTVTY\_WK

**Source Tables**

DWD\_CERTIFICATE\_ACTVTY\_TRX  
DWR\_DAY

**Aggregate View Creation Script**

DWA\_CERTIFICATE\_ACTVTY\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWA\_CERTIFICATE\_ACTVTY\_DAY\_MV\_LOG.sql

DWR\_DAY\_MV\_LOG.sql

## **DWA\_CUST\_ORDR\_DEPT\_MO\_MV.sql**

(SI Number 43) Script for creation of relational materialized view DWA\_CUST\_ORDR\_DEPT\_MO\_MV from DWA\_CUST\_ORDR\_SBC\_MO\_MV and DWR\_ITEM\_SBC.

### **Target Table**

DWA\_CUST\_ORDR\_DEPT\_MO

### **Source Tables**

DWD\_CUST\_ORDR\_ITEM\_DAY  
DWR\_SKU\_ITEM  
DWR\_DAY  
DWR\_BSNS\_WK  
DWR\_ITEM\_SBC

### **Aggregate View Creation Script**

DWA\_CUST\_ORDR\_DEPT\_MO.sql

### **Relational Materialized View Log Creation Scripts**

DWA\_CUST\_ORDR\_SBC\_MO\_MV\_LOG.sql  
DWR\_ITEM\_SBC\_MV\_LOG.sql

## **DWA\_MKT\_SLS\_DEPT\_WK\_MV.sql**

(SI Number 44) Script for creation of relational materialized view DWA\_MKT\_SLS\_DEPT\_WK\_MV from DWA\_MKT\_SLS\_ITEM\_WK,DWR\_ITEM\_MKT\_DATA.

### **Target Table**

DWA\_MKT\_SLS\_DEPT\_WK

### **Source Tables**

DWB\_MKT\_SLS\_ITEM\_WK  
DWR\_ITEM\_MKT\_DATA

### **Aggregate View Creation Script**

DWA\_MKT\_SLS\_DEPT\_WK.sql

### **Relational Materialized View Log Creation Scripts**

DWB\_MKT\_SLS\_ITEM\_WK\_MV\_LOG.sql  
DWR\_ITEM\_MKT\_DATA\_MV\_LOG.sql

## **DWA\_INV\_VNDR\_CMPLNC\_MV.sql**

(SI Number 45) Script for creation of relational materialized view DWA\_INV\_VNDR\_CMPLNC\_MV from DWB\_INV\_CNTRL\_DOC\_LI,DWR\_SKU\_ITEM,DWR\_ITEM\_SEASON,DWB\_PCHSE\_ORDR\_LI.

### **Target Table**

DWA\_INV\_VNDR\_CMPLNC

**Source Tables**

DWB\_INV\_CNTRL\_DOC\_LI  
 DWR\_SKU\_ITEM  
 DWR\_ITEM\_SEASON  
 DWB\_PCHSE\_ORDR\_LI

**Aggregate View Creation Script**

DWA\_INV\_VNDR\_CMPLNC.sql

**Relational Materialized View Log Creation Scripts**

DWB\_INV\_CNTRL\_DOC\_LI\_MV\_LOG.sql  
 DWR\_SKU\_ITEM\_MV\_LOG.sql  
 DWR\_ITEM\_SEASON\_MV\_LOG.sql  
 DWB\_PCHSE\_ORDR\_LI\_MV\_LOG.sql

**DWA\_VNDR\_CMPLNC\_ITEM\_WK\_MV.sql**

(SI Number 46) Script for creation of relational materialized view DWA\_VNDR\_CMPLNC\_ITEM\_WK\_MV from DWB\_INV\_CNTRL\_DOC\_LI, DWB\_PCHSE\_ORDR\_LI and DWV\_TIME\_DAY.

**Target Table**

DWA\_VNDR\_CMPLNC\_ITEM\_WK

**Source Tables**

DWB\_PCHSE\_ORDR\_LI  
 DWB\_INV\_CNTRL\_DOC\_LI  
 DWR\_DAY

**Aggregate View Creation Script**

DWA\_VNDR\_CMPLNC\_ITEM\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWB\_PCHSE\_ORDR\_LI\_MV.sql  
 DWB\_INV\_CNTRL\_DOC\_LI\_MV.sql  
 DWR\_DAY\_MV.sql

**DWA\_VNDR\_CMPLNC\_WK\_MV.sql**

(SI Number 47) Script for creation of relational materialized view DWA\_VNDR\_CMPLNC\_WK\_MV from DWB\_PCHSE\_ORDR\_LI, DWB\_INV\_CNTRL\_DOC\_LI, and DWV\_TIME\_DAY.

**Target Table**

DWA\_VNDR\_CMPLNC\_WK

**Source Tables**

DWB\_PCHSE\_ORDR\_LI  
 DWB\_INV\_CNTRL\_DOC\_LI  
 DWR\_DAY

**Aggregate View Creation Script**

DWA\_VNDR\_CMPLNC\_WK.sql

**Relational Materialized View Log Creation Scripts**

DWB\_PCHSE\_ORDR\_LI.sql

DWB\_INV\_CNTRL\_DOC\_LI.sql

DWR\_DAY.sql

## Data Mining Component ETL

Oracle Retail Data Model provides an optional data mining component. This data mining component extends the core functionality of Oracle Retail Data Model by adding data mining models. This section provides reference information about:

- [Data Mining ETL Packages](#)
- [Model Build Procedures](#)

**See:** For information on how to use these packages and procedures, see *Oracle Retail Data Model Operations Guide*.

### Data Mining ETL Packages

Oracle Retail Data Model includes data mining packages. The data mining portion of Oracle Retail Data Model consists of source tables that are populated by detail data for use by the data mining packages. This data is organized in a specific way to be compatible with the data mining modules so they can properly analyze and mine the data. Data mining packages pull in the source data and feed it into the data mining packages, and populate the target tables with the results. The data in the target tables are presented by the OBIEE reports.

When you install the Data Mining component of Oracle Retail Data Model, two types of data mining ETL packages are installed:

- **Packages that populate the Source Input Tables for the data mining models.**

In the BIA\_RTL\_mining schema, tables of the form \*\_SRC contain source input data for the data mining models. The data in the \*\_SRC tables is populated from base or derived tables in the BIA\_RTL schema using the Mining ETL packages. The Mining ETL packages have names of the form PKG\_POP\_DM\_\*.

The procedures PKG\_POP\_DM\_\*.LOADDATA(*p\_yearmonth*) load data from base and derived tables in the BIA\_RTL schema to mining source tables (\*\_SRC in the BIA\_RTL\_mining schema). The parameter *p\_yearmonth* is the Business Month that you want to analyze. All Business Months are stored in DWR\_BSNS\_MO in BIA\_RTL schema. The input of *p\_yearmonth* must be in DWR\_BSNS\_MO.MO\_KEY.

- **Packages that create data mining models.**

The Oracle Retail Data Model packages PKG\_RBIW\_DM\_\* create mining models. The table below lists the packages that create mining models and the mining model that each package creates:

**Table 5–3 Data Mining Packages in Oracle Retail Data Model**

| Model  | Model ETL Package      | Model Creation Package  |
|--|------------------------|-------------------------|
| Associate Basket Analysis Model              | PKG_POP_DM_ASSBAS      | PKG_RBIW_DM_ASSBAS      |
| Associate Loss Analysis Model                | PKG_POP_DM_ASSLOSS     | PKG_RBIW_DM_ASSLOSS     |
| Associate Sales Analysis Model               | PKG_POP_DM_ASSSLs      | PKG_RBIW_DM_ASSSLs      |
| Customer Category Mix Analysis Model         | PKG_POP_DM_CUSTCATGMIX | PKG_RBIW_DM_CUSTCATGMIX |
| Customer Loyalty Analysis Model              | PKG_POP_DM_CUSTLTy     | PKG_RBIW_DM_CUSTLTy     |
| Frequent Shopper Category Mix Analysis Model | PKG_POP_DM_FSCATGMIX   | PKG_RBIW_DM_FSCATGMIX   |
| Item Basket Analysis Model                   | PKG_POP_DM_ITMBAS      | PKG_RBIW_DM_ITMBAS      |
| Item POS Loss Analysis Model                 | PKG_POP_DM_ITMPOSLOSS  | PKG_RBIW_DM_ITMPOSLOSS  |
| POS Flow Analysis Model                      | PKG_POP_DM_POSFLOW     | PKG_RBIW_DM_POSFLOW     |
| Store Loss Analysis Model                    | PKG_POP_DM_STRLOSS     | PKG_RBIW_DM_STRLOSS     |

**See:** For information on how to use these packages , see *Oracle Retail Data Model Operations Guide*.

## Model Build Procedures

Oracle Retail Data Model creates mining models using the following three Oracle Data Mining algorithms: Adaptive Bayes (ABN, Decision Tree (DT) , and Association (APASS).

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**Note:** In Oracle Data Mining, Association is abbreviated as AR.

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These algorithms all build models that have rules. For information about the algorithms, see *Oracle Data Mining Concepts*.

Each package (analysis) builds models using one or two of these three algorithms. The models built depend on the analysis being performed. The output of the model build is a view containing rules generated by the model.

This section describes

- [Model Build Procedures for Each Type of Model](#)
- [Model Build Procedure Parameters](#)
- [Model Build Procedure Output](#)

**See:** For detailed information on how to use these packages to create data mining models, see *Oracle Retail Data Model Operations Guide*.

## Model Build Procedures for Each Type of Model

There is a build procedure for each type of model. The build procedures are as follows:

- Adaptive Bayes Network (ABN) models

```
PRC_RUNALL_ABN(
    p_case_table    IN VARCHAR2,
    p_model_name    IN VARCHAR2,
    p_year          IN NUMBER,
    p_month         IN VARCHAR,
    p_drop_output   IN BOOLEAN
)
```

- Decision Tree (DT) models:

```
PRC_RUNALL_DT (
    p_case_table    IN VARCHAR2 ,
    p_model_name    IN VARCHAR2 ,
    p_year          IN NUMBER,
    p_month         IN VARCHAR,
    p_drop_output   IN BOOLEAN
)
```

- Association (APASS) models (using the Apriori algorithm):

```
PRC_RUNALL_APASS(
    p_case_table IN VARCHAR2,
    p_model_name IN VARCHAR2,
    p_year IN NUMBER,
    p_month IN VARCHAR,
    p_drop_output IN BOOLEAN
)
```

## Model Build Procedure Parameters

All of the packages use the same parameters:

| Parameter     | Description   |
|---------------|---|
| p_case_table  | Mining source table name, the full table name with the suffix _SRC  |
| p_model_name  | Name of the new model   |
| p_year        | The year for model predictions. The value must exist in the *_SRC.YEAR column, where *_SRC is the corresponding source table for this package   |
| p_month       | The month for model predictions. The value must exist in the *_SRC.MONTH column, where *_SRC is the corresponding source table for this package   |
| p_drop_output | A Boolean value indicating if an existing model is dropped before build: <ul style="list-style-type: none"> <li>■ TRUE: Drop an existing model before building the model</li> <li>■ FALSE: Do not drop an existing model before building the model. If a model with same name already exists, an error like "ORA-20001: Model exists: ASSBAS_MDL_ABN_109" is returned.</li> </ul> |

## Model Build Procedure Output

After the mining model is created, the rules are saved in the tables RBIW\_DM\_RULES and RBIW\_DM\_APASS\_RULES. Analysis-specific views are defined based on these two tables. The views can be used to retrieve the rules of each model. The models for

each type of analysis and the corresponding Views containing the model rules are as follows:

| Data Mining Model (Analysis)                 | Model Type | View Containing Model Rules   |
|--|------------|-------------------------------|
| Associate Basket Analysis Model              | ABN, DT    | ASSOCIATE_BASKET_RULES        |
| Associate Loss Analysis Model                | ABN, DT    | ASSOCIATE_LOSS_RULES          |
| Associate Sales Analysis Model               | ABN, DT    | ASSOCIATE_SALES_RULES         |
| Customer Category Mix Analysis Model         | ABN, DT    | CUST_CATEGORY_MIX_RULES       |
| Customer Loyalty Analysis Model              | ABN, DT    | CUSTOMER_LOYALTY_RULES        |
| Frequent Shopper Category Mix Analysis Model | ABN,DT     | FS_CATEGORY_MIX_RULES         |
| Item Basket Analysis Model                   | ABN, DT    | ITEM_BASKET_RULES             |
| Item POS Loss Analysis Model                 | ABN, DT    | ITEM_POS_LOSS_RULES           |
| POS Flow Analysis Model                      | ABN, DT    | POS_FLOW_RULES                |
| Store Loss Analysis Model                    | ABN, DT    | STORE_LOSS_RULES              |
| Frequent Shopper Category Mix Analysis Model | APASS      | FS_CATEGORY_MIX_APASS_RULES   |
| Customer Category Mix Analysis Model         | APASS      | CUST_CATEGORY_MIX_APASS_RULES |

## OLAP Component ETL

Oracle Retail Data Model provides an optional OLAP component. This OLAP component extends the core functionality of Oracle Retail Data Model by adding OLAP cubes for OLAP analysis and forecasting.

Oracle Retail Data Model OLAP cubes are *not* populated using a formal Extract, Transform, and Load workflow process. Instead, OLAP cubes are populated through SQL scripts that use the `RBIA_OLAP_ETL_AW_LOAD` package that is provided with the OLAP component.

This section discusses:

- [When is the OLAP Component Populated?](#)
- [OLAP Component Installation Scripts](#)
- [OLAP\\_ETL\\_AW\\_LOAD Package](#)

### When is the OLAP Component Populated?

OLAP cubes are populated at the following times:

1. During the initial load of the OLAP cubes.

This load is performed by a SQL script (sometimes called the "OLAP cube initial load script") that is delivered with the Oracle Retail Data Model OLAP component. The actual script that performs the OLAP cube initial load varies depending on Oracle Database release:

- For Oracle Database 10g, the script is `ordm_olap_install_scr.sql`
- For Oracle Database 11g, the script is `ordm_olap_11g_install_scr.sql`

When the relational data exists in the Oracle Retail Data Model data warehouse, the OLAP cube initial load script loads relational table data (from a specified start date to the present time) into the OLAP cubes. It also performs the default OLAP forecasts. (For detailed information about the behavior of the OLAP cube initial load script, see ["OLAP Component Installation Scripts"](#) on page 5-32.)

You can execute the OLAP cube initial load SQL script in the following ways:

- Implicitly, by installing the Oracle Retail Data Model OLAP component *after* you have loaded data into the Oracle Retail Data Model relational tables. For instructions on how to install the Oracle Retail Data Model OLAP component, see *Oracle Retail Data Model Installation Guide*.
  - Explicitly after you have installed the Oracle Retail Data Model OLAP component and populated the relational tables. In this case, you execute the OLAP cube initial load SQL program as you would any other SQL program.
2. On a scheduled basis to update the OLAP cube data with the relational data that has been added to the Oracle Retail Data Model data warehouse since the initial load of the OLAP cubes.

This type of load (sometimes referred to as an "intermittent" or "refresh" load) merely adds relational data from a specified time period to the data in the Sales and Inventory cubes; it does not change the data in the Sales Forecast and Inventory Forecast cubes.

Oracle Retail Data Model does *not* provide an OLAP intermittent load cube script. You must write your own OLAP intermittent load cube script using the RBIA\_OLAP\_ETL\_AW\_LOAD package.

For information on writing your own intermittent OLAP cube program and for updating the data in the OLAP forecast cubes, see *Oracle Retail Data Model Operations Guide*.

## OLAP Component Installation Scripts

Installing the Oracle Retail Data Model OLAP component triggers the execution of two SQL scripts that are provided with the OLAP component: the Oracle Retail Data Model OLAP environment setup script, and the Oracle Retail Data Model OLAP cube initial load script.

### Oracle Retail Data Model OLAP environment setup script

The OLAP environment setup script creates and sets up the Oracle Retail Data Model OLAP environment.

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**Note:** The actual script that sets up the OLAP environment varies depending on Oracle Database release:

- For Oracle Database 10g the script is `ordm_olap_user_env_scr.sql`
  - For Oracle Database 11g, the script is `ordm_olap_11g_user_env_scr.sql`
- 
- 

The environment setup script performs the following tasks:

1. Creates OLAP tablespaces and Oracle Retail Data Model OLAP schema user `bia_rtl_olap`.

2. Assigns required grants and privileges to `bia_rtl_olap` user
3. Creates the analytic workspace(s) that define all of the analytic workspace objects used by the OLAP component.

**See:** For more detailed information about the objects defined by the `bia_rtl_olap` schema, including the analytic workspaces defined by the schema, see the discussion of the physical model of the OLAP component in *Oracle Retail Data Model Reference*.

### Oracle Retail Data Model OLAP cube initial load script

The OLAP cube initial load script loads the dimensions and fact data from the relational star schema into the analytic workspace dimension and cubes and executes the OLAP forecasts.

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**Note:** The actual script that performs the OLAP cube initial load varies depending on Oracle Database release:

- For Oracle Database 10g, the script is `ordm_olap_install_scr.sql`
  - For Oracle Database 11g, the script is `ordm_olap_11g_install_scr.sql`
- 
- 

To populate the OLAP cubes in Oracle Retail Data Model, the OLAP cube initial load script performs the following tasks:

1. Executes the `RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AWBUILD` subprogram in `HISTORICAL` mode from historical start date to historical end date. This populates all of analytic workspace objects (including the OLAP forecast cubes) with relational data within the date range specified.
2. Executes the `RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AWBUILD` subprogram in `INCREMENTAL` mode from `historical_end_date+1` to `SYSDATE-1`. This adds relational table data within the date range specified to the Sales and Inventory cubes. No changes are made to the Sales Forecast and Inventory Forecast cubes.

**See:** For a more complete description of the actions performed during an historical or incremental load, see the description of the [OLAP\\_ETL\\_AW\\_BUILD](#) subprogram of the [OLAP\\_ETL\\_AW\\_LOAD Package](#).

## OLAP\_ETL\_AW\_LOAD Package

The `OLAP_ETL_AW_LOAD` package contains subprograms that create the analytic workspace(s), the analytic workspace definitions for the OLAP cube, and populates the cube. The behavior of subprograms in the `OLAP_ETL_AW_LOAD` package varies depending on are the type of load being performed (that is, an historical or incremental load) and the date range of the load:

- You specify the type of load as a parameter (`HISTORICAL` or `INCREMENTAL`) of the subprogram. In the installation scripts provided with Oracle Retail Data Model, data is loaded into the OLAP cubes in `HISTORICAL` mode. You specify `INCREMENTAL` mode in any scripts that you write to refresh the data in the OLAP cubes.

- The subprograms retrieve the value for the date range of the load from the BIA\_RTL.DWC\_ETL\_PARAMETER table for process name "RBIA-INTRA-ETL-OLAP". This value is populated at the following times:
  - During the installation process when the user enters the start and end dates in response to a program prompt. The values specified by the user are used by the SQL scripts that install the OLAP component.
  - At any time, by issuing a SQL UPDATE BIA\_RTL.DWC\_ETL\_PARAMETERSET statement.

**See also:** "OLAP Component Installation Scripts" on page 5-32, *Oracle Retail Data Model Installation Guide*, and "Summary of the OLAP\_ETL\_AW\_LOAD Subprograms" on page 5-34.

### Summary of the OLAP\_ETL\_AW\_LOAD Subprograms

Table 5-4 lists the all of the package subprograms.

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**Note:** Although the subprogram code varies depending on the Oracle Database release for which you have installed the OLAP component (that is, for Oracle Database 10g or Oracle Database 11g), the subprogram behavior is the same for both releases.

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**Table 5-4 OLAP\_ETL\_AW\_LOAD Package Subprograms**

| Subprogram            | Description  |
|-----------------------|--|
| OLAP_ETL_AW_BUILD     | Resets the relational views of the source relational tables based on the start and end date values for the "RBIA-INTRA-ETL-OLAP" process of the BIA_RTL.DWC_ETL_PARAMETER table, builds the PLSINV analytic workspace, and populates the analytic workspace data objects.  |
| OLAP_ETL_AW_CUBES     | The HISTORICAL load populates the OLAP dimensions and cubes based on the existing status of the dimension and fact source views. After populating the dimensions and cubes, it performs the default forecasting.   |
| OLAP_ETL_AW_DIMBUILD  | Populates dimensions in the analytic workspace.  |
| OLAP_ETL_AW_CUBEBUILD | Populates a specified cube in PLSINV analytic workspace.   |
| OLAP_ETL_AW_REPL_DEFN | Functionality in historical mode varies by release: <ul style="list-style-type: none"> <li>■ (10g) Replaces the definitions in the specified target analytic workspace with the definitions from the specified source analytic workspace.</li> <li>■ (11g) Clears the data in the PLSINV analytic workspace data objects by deleting the dimension members of all the dimensions of the analytical workspace.</li> </ul> |

**Table 5–4 (Cont.) OLAP\_ETL\_AW\_LOAD Package Subprograms**

| Subprogram                              | Description   |
|---|---|
| <a href="#">OLAP_ETL_AW_RESET_VIEWS</a> | Sets the date ranges of the fact data to be captured as part of the Oracle Retail Data Model OLAP load process. For both historical and incremental loads, the date range is read from the <code>DWC_ETL_PARAMETER</code> table for record with <code>PROCESS_NAME = 'RBIA-INTRA-ETL-OLAP'</code> . The fact cubes are always loaded from the <code>*_CURR</code> fact views. However the <code>*_CURR</code> view points to either the <code>*_FULL</code> or <code>*_INCR</code> view based on the load type. |

**OLAP\_ETL\_AW\_BUILD**

Resets the relational views of the source relational tables based on the start and end date values for the "RBIA-INTRA-ETL-OLAP" process of the `BIA_RTL.DWC_ETL_PARAMETER` table, builds the PLSINV analytic workspace, and loads the analytic workspace data objects.

**Syntax**

```
RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AW_BUILD (
  mode                VARCHAR2,
  build_type          VARCHAR2,
  max_job_queues      INTEGER);
```

## Parameters

**Table 5–5 OLAP\_ETL\_AW\_BUILD Procedure Parameters**

| Parameter      | Description   |
|----------------|---|
| mode           | <p>The following modes are supported:</p> <p><b>HISTORICAL</b> - Deletes the data from the in the active analytic workspace (PSLSINV) data objects, and populates the dimensions, and populates <i>all</i> of the cubes in the PLSINV analytic workspace.</p> <p>Specifically, when you specify <b>HISTORICAL</b>, the subprogram populates the PLSINV analytic workspace by taking the following actions:</p> <ol style="list-style-type: none"> <li>1. Clears the data in the analytic workspace data objects by deleting the analytic workspace dimension values.</li> <li>2. Resets the relational views of the relational source fact tables to the relational data specified by the load start and end date parameters present in table <code>BIA_RTL.DWC_ETL_PARAMETER</code> for process name "RBIA-INTRA-ETL-OLAP".</li> <li>3. Populates the analytic workspace Product, Organization, and Time dimensions and hierarchies.</li> <li>4. Populates the facts (that is, the lowest or leaf level data) of the Sales and Inventory cubes.</li> <li>5. Aggregates the Sales and Inventory cubes.</li> <li>6. (Oracle Database 10g only) Executes a custom program to reset time-series metadata for year-to-date calculations.</li> <li>7. Populates the facts (that is, the lowest or leaf level data) of the Sales Forecast and Inventory Forecast cubes by executing the default Sales and Inventory forecast OLAP DML programs that use the data present in two years (by default, years 2005 and 2006) to forecast data for the third year (by default, year 2007).</li> <li>8. Aggregates the Sales Forecast and Inventory Forecast cubes.</li> </ol> <p><b>INCREMENTAL</b> - (Default) Populates the dimensions and Sales and Inventory cubes with only the data that has been added to the relational tables since the last good load. It does <i>not</i> change the values of the Sales Forecast and Inventory Forecast cubes.</p> <p>Specifically, when you specify <b>INCREMENTAL</b>, the subprogram performs the following actions:</p> <ol style="list-style-type: none"> <li>1. Resets the relational views of the relational source fact tables to the relational data specified by the load start and end date parameters present in table <code>BIA_RTL.DWC_ETL_PARAMETER</code> for process name "RBIA-INTRA-ETL-OLAP".</li> <li>2. Populates the analytic workspace Product and Organization dimensions in append mode.</li> <li>3. Populates the facts (that is, the lowest or leaf level data) of the Sales and Inventory cubes.</li> <li>4. Aggregates the Sales and Inventory cubes.</li> </ol> |
| build_type     | <p>One of the following values: <b>EXECUTE</b> (which is the default value of this parameter), or <b>BACKGROUND</b></p>   |
| max_job_queues | <p>Specifies the number of parallel jobs used to execute the aggregation steps.</p> <p>Default value: 4</p> <p>Recommended value: <i>number-of-CPUs - 1</i></p>   |

## OLAP\_ETL\_AW\_CUBES

The HISTORICAL load populates the OLAP dimensions and cubes based on the existing status of the dimension and fact source views. After populating the dimensions and cubes, it performs the default forecasting.

### Syntax

```
RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AW_CUBES (
    mode                VARCHAR2,
    build_type          VARCHAR2,
    max_job_queues      INTEGER);
```

### Parameters

The parameters are described in the following table.

**Table 5–6 OLAP\_ETL\_AW\_CUBES Procedure Parameters**

| Parameter      | Description  |
|----------------|--|
| mode           | <p>The following modes are supported:</p> <p><b>HISTORICAL</b> - Loads the dimensions and cubes based on the existing status of the dimensions and fact source views. It also performs the default forecasting process after populating the dimensions and facts.</p> <p>The historical load loads data as follows:</p> <ol style="list-style-type: none"> <li>1. Populates the Product, Organization, and Time dimensions.</li> <li>2. Populates the facts (leaf or bottom-level values) in the Sales and Inventory cubes</li> <li>3. Aggregates the Sales and Inventory cubes.</li> <li>4. (Oracle Database 10g) Runs a custom program to reset time-series metadata for year-to-date calculations.</li> <li>5. Populates the facts (that is, the lowest or leaf level data) of the Sales Forecast and Inventory Forecast cubes by executing the default Sales and Inventory forecast OLAP DML programs that use the data present in two years (by default, years 2005 and 2006) to forecast data for the third year (by default, year 2007..</li> <li>6. Aggregates the Sales Forecast and Inventory Forecast cubes.</li> </ol> <p><b>INCREMENTAL</b> - (Default) Takes only the data since the last good load and adds that data to the data that has already been loaded. It does <i>not</i> perform forecasting as part of the load. Instead, an incremental load which is run with the option "Aggregate the cube for only the incoming data values" turned on and performs only the following tasks:</p> <ol style="list-style-type: none"> <li>1. Populates the Product and Organization dimensions in append mode.</li> <li>2. Loads facts (leaf or bottom-level) of the Sales and Inventory Cubes.</li> <li>3. Aggregates the Sales and Inventory cubes.</li> </ol> |
| build_type     | One of the following values: EXECUTE (which is the default value of this parameter), or BACKGROUND   |
| max_job_queues | <p>Specifies the number of parallel jobs used to execute the aggregation steps.</p> <p>Default value: 4</p> <p>Recommended value: <i>number-of-CPUs - 1</i></p>  |

## OLAP\_ETL\_AW\_DIMBUILD

Builds all of the dimensions in the PLSINV analytic workspace.

### Syntax

```

RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AW_DIMBUILD (
    mode                VARCHAR2,
    build_type          VARCHAR2,
    max_job_queues      INTEGER);

```

### Parameters

The parameters are described in the following table.

**Table 5-7 OLAP\_ETL\_AW\_DIMBUILD Procedure Parameters**

| Parameter      | Description  |
|----------------|--|
| mode           | <p>The following modes are supported:</p> <p>HISTORICAL - Populates the Product, Organization, and Time dimensions based on the current status of the dimension source views.</p> <p>INCREMENTAL - (Default) Populates the Product, Organization, and Time dimensions based on the current status of the dimension source views.</p> |
| build_type     | One of the following values: EXECUTE (which is the default value of this parameter), or BACKGROUND   |
| max_job_queues | <p>Specifies the number of parallel jobs used to execute the aggregation steps.</p> <p>Default value: 4</p> <p>Recommended value: <i>number-of-CPUs - 1</i></p>  |

## OLAP\_ETL\_AW\_CUBEBUILD

Populates a specified cube in the PLSINV analytic workspace.

### Syntax

```

RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AW_CUBEBUILD (
    name                VARCHAR2,
    mode                VARCHAR2,
    build_type          VARCHAR2,
    max_job_queues      INTEGER);

```

### Parameters

The parameters are described in the following table.

**Table 5-8 OLAP\_ETL\_AW\_CUBEBUILD Procedure Parameters**

| Parameter | Description  |
|-----------|--|
| name      | <p>The fully-qualified name of the cube you want to build.</p> <p>The default cube name varies depending on the Oracle Database release:</p> <ul style="list-style-type: none"> <li>■ For Oracle Database 10g, OOS_SALES.CUBE</li> <li>■ For Oracle Database 11g, OOS_SALES</li> </ul> |

**Table 5–8 (Cont.) OLAP\_ETL\_AW\_CUBEBUILD Procedure Parameters**

| Parameter      | Description   |
|----------------|---|
| mode           | The following modes are supported:<br><br>HISTORICAL - Loads the specified cube based on the data in the source fact view. Data is loaded onto the existing state of the cube. Typically for a HISTORICAL load, the existing state of the cubes are empty (that is, devoid of data).<br><br>INCREMENTAL - (Default) Loads the specified cube based on the data in the source fact view. Data is loaded and aggregated incrementally (that is, data is added on to the cube data that has been previously loaded). |
| build_type     | One of the following values: EXECUTE (which is the default value of this parameter), or BACKGROUND  |
| max_job_queues | Specifies the number of parallel jobs used to execute the aggregation steps.<br><br>Default value: 4<br><br>Recommended value: <i>number-of-CPUs - 1</i>  |

### OLAP\_ETL\_AW\_REPL\_DEFN

Functionality in historical mode varies by release:

- (10g) Replaces the definitions in the specified target analytic workspace with the definitions from the specified source analytic workspace.
- (11g) Clears the data in the PLSLSINV analytic workspace data objects by deleting the dimension members of all the dimensions of the analytical workspace.

### Syntax

```

RBI_A_OLAP_ETL_AW_LOAD.OLAP_ETL_AW_REPL_DEFN (
  mode          VARCHAR2,
  sourceAW     VARCHAR2,
  targetAW     VARCHAR2);

```

### Parameters

The parameters are described in the following table.

**Table 5–9 OLAP\_ETL\_AW\_REPL\_DEFN Procedure Parameters**

| Parameter | Description  |
|-----------|--|
| mode      | The following modes are supported:<br><br>HISTORICAL - (Default) Varies by release: <ul style="list-style-type: none"> <li>■ (10g) Replaces the definitions in the specified target analytic workspace with the definitions from the specified source analytic workspace.</li> <li>■ (11g) Clears the data in the PLSLSINV analytic workspace data objects by deleting the dimension members of all the dimensions of the analytical workspace.</li> </ul> INCREMENTAL - Nonoperative. |

**Table 5–9 (Cont.) OLAP\_ETL\_AW\_REPL\_DEFN Procedure Parameters**

| Parameter | Description   |
|-----------|---|
| sourceAW  | (Oracle Database 10g <i>only</i> ) The analytic workspace that contains the definitions for the analytic workspace, but not the data.<br><br>Default value varies by Oracle Database release: <ul style="list-style-type: none"> <li>■ Oracle Database 10g: ESLSINV</li> <li>■ Oracle Database 11g: null</li> </ul> |
| targetAW  | Adds a record in table for the value specified by this parameter.<br>Default value is PLSLSINV.   |

## OLAP\_ETL\_AW\_RESET\_VIEWS

Sets the date ranges of the fact data to be captured as part of the Oracle Retail Data Model OLAP load process. For both historical and incremental loads, the date range is read from the DWC\_ETL\_PARAMETER table for record with PROCESS\_NAME = 'RBIA-INTRA-ETL-OLAP'. The fact cubes are always loaded from the \*\_CURR fact views. However the \*\_CURR view points to either the \*\_FULL or \*\_INCR view based on the load type.

### Syntax

```
RBIA_OLAP_ETL_AW_LOAD.OLAP_ETL_AW_RESET_VIEWS (
    mode                VARCHAR2);
```

### Parameters

The parameters are described in the following table.

**Table 5–10 OLAP\_ETL\_AW\_BUILD Procedure Parameters**

| Parameter | Description   |
|-----------|---|
| mode      | The following modes are supported: <p>HISTORICAL - Sets the date range filter in the *_FULL fact view. In this case, the *_CURR fact view is made to point to *_FULL fact view.</p> <p>INCREMENTAL - (Default) Sets the date range filter in the *_INCR fact view. In this case, the *_CURR fact view is made to point to *_INCR fact view.</p> |

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## Data Mining Models in Oracle Retail Data Model

This chapter provides reference information about the data mining models that are provided with Oracle Retail Data Model if you do choose to install the Data Mining Option. "About Data Mining in Oracle Retail Data Model" on page 6-1 provides overview information. The rest of this chapter describes the following data mining models in more detail:

- Associate Basket Analysis Model
- Associate Loss Analysis Model
- Associate Sales Analysis Model
- Customer Category Mix Analysis Model
- Customer Loyalty Analysis Model
- Frequent Shopper Category Mix Analysis Model
- Item Basket Analysis Model
- Item POS Loss Analysis Model
- POS Flow Analysis Model
- Store Loss Analysis Model

Each model topic provides the following types of information: a description of the model, examples of desired rules, a discussion of what the discovered rules explain, a discussion of what the model mines, a list of the target variables, a list of columns included in the target views, and sample reports.

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**Note:** For instructions on setting up and loading the data mining source, and executing the data mining models, see "Populating the Data Mining Component" in *Oracle Retail Data Model Operations Guide*.

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### About Data Mining in Oracle Retail Data Model

Oracle Retail Data Model includes data mining packages. The data mining portion of Oracle Retail Data Model consists of source tables that are populated by detail data for use by the data mining packages. This data is organized in a specific way to be compatible with the data mining modules so they can properly analyze and mine the data. Data mining packages pull in the source data and feed it into the data mining packages, and populate the target tables with the results. The data in the target tables are presented by the OBIEE reports.

**Tip:** Changed or new data models are not supported by Oracle Retail Data Model. Consequently, do not change the data models that are defined and delivered with Oracle Retail Data Model, but, instead, copy a delivered data model to create a new one.

As outlined in [Table 6–1](#), the Oracle Retail Data Model data mining models are of three types: Adaptive Bayes Network (ABN), Decision Tree (DT) and Apriori Association (APASS).

**Table 6–1 Oracle Retail Data Model Data Model Types**

| Model  | ABN | DT  | APASS |
|--|-----|-----|-------|
| <a href="#">Associate Basket Analysis Model</a>              | yes | yes | no    |
| <a href="#">Associate Loss Analysis Model</a>                | yes | yes | no    |
| <a href="#">Associate Sales Analysis Model</a>               | yes | yes | no    |
| <a href="#">Customer Category Mix Analysis Model</a>         | no  | no  | yes   |
| <a href="#">Customer Loyalty Analysis Model</a>              | yes | yes | no    |
| <a href="#">Frequent Shopper Category Mix Analysis Model</a> | no  | no  | yes   |
| <a href="#">Item Basket Analysis Model</a>                   | yes | yes | no    |
| <a href="#">Item POS Loss Analysis Model</a>                 | yes | yes | no    |
| <a href="#">POS Flow Analysis Model</a>                      | yes | yes | no    |
| <a href="#">Store Loss Analysis Model</a>                    | yes | yes | no    |

**See also:** ["Physical Data Model of the Data Mining Component"](#) on page 3-42 and ["Data Mining ETL Packages"](#) on page 5-28.

## Associate Basket Analysis Model

This model addresses the business problem of building a profile of associates to explain their basket KPIs, such as Total Baskets, Average Basket Value, and other statistics.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Associate Basket Analysis Model Report

This section provides examples of the desired rules.

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**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

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### Desired Rules Example 1

```
IF
SALARY ELIGIBILITY is (N)
AND
EMPLOYEE_TYPE is (TEMPORARY)
THEN
NUMBER OF BASKETS IS THE HIGHEST
```

### Desired Rules Example 2

```
IF
SALARY ELIGIBILITY is (N)
AND
EMPLOYEE_TYPE is (TEMPORARY)
THEN
NUMBER OF BASKETS IS THE LOWEST
```

## What the Discovered Rules for the Associate Basket Analysis Model Report Explain

The discovered rules provide correlations between the basket KPIs and associate (employee) attributes.

## What the Associate Basket Analysis Model Mines

This analysis identifies which key attributes of an associate influence his or her number of baskets sold, average basket value, and size. This model mines the various attributes of associates. It takes the binned variables one at a time for the Total Basket Count, Average Basket Value, and Average Basket Size as the target variable of an Adaptive Bayes Network (ABN) and Decision Tree (DT) model with a single feature and discovers rules described in terms of associate attributes.

## Target Variables for the Associate Basket Analysis Model

The rules are designed to be generated monthly. Therefore, nine ABN and nine DT models are created every month across all the associates using the following variables as targets in this order:

1. Total Basket Count Quartile (TBCQR)
2. Total Basket Count Quintile (TBCQN)
3. Total Basket Count Decile (TBCDE)
4. Average Basket Value Quartile (ABVQR)
5. Average Basket Value Quintile (ABVQN)
6. Average Basket Value Decile (ABVDE)
7. Average Basket Size Quartile (ABSQR)
8. Average Basket Size Quintile (ABSQN)

## 9. Average Basket Size Decile (ABSDE)

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**Note:** Associates are grouped into N-Tiles according to their sales performance figures.

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### Source Variables for the Associate Basket Analysis Model

The following attributes of associates are identified from the Oracle Retail Data Model data warehouse tables as source variables for the models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Year
- Month
- Employee Id
- Designation Name
- Designation Title
- Designation Level
- Nationality
- Gender
- Marital Status
- Age
- Net Income
- Demographics Code
- Title
- Total Months of Job
- Employee Type
- Correspondence Language
- Disability Indicator
- Rehire Recommendation Indicator
- HR Based Salary Eligibility Indicator
- Overtime Hours Salary Eligibility Indicator
- Commission Eligibility Indicator
- SPIFF Allowed Flag
- Total Hours Worked
- Total Overtime Hours
- Total Basket Count Quartile (Target)
- Total Basket Count Quintile (Target)
- Total Basket Count Decile (Target)
- Average Basket Value Quartile (Target)

- Average Basket Value Quintile (Target)
- Average Basket Value Decile (Target)
- Average Basket Size Quartile (Target)
- Average Basket Size Quintile (Target)
- Average Basket Size Decile (Target)

### **Columns Included in the Target Views of the Associate Basket Analysis Model Report**

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and are also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)

- Attribute Type

## Associate Loss Analysis Model

This model addresses the business problem of correlating associate characteristics to shrink and theft.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Associate Loss Analysis Model Report

This section provides examples of the desired rules.

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---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---

---

### Desired Rules Example 1

```
IF
DESIGNATION is (TEMPORARY CASHIER)
AND
COMMISSION_ELIGIBILITY is (Y)
THEN
SHRINK TO SALES RATIO IS THE HIGHEST
```

### Desired Rules Example 2

```
IF
DESIGNATION is (TEMPORARY CASHIER)
AND
COMMISSION_ELIGIBILITY is (N)
THEN
SHRINK TO SALES RATIO IS THE LOWEST
```

## What the Discovered Rules of the Associate Loss Analysis Model Explain

The discovered rules explain the reasons for the shrink and theft associated with an Associate.

## What the Associate Loss Analysis Model Mines

This model mines the Total Shrink Count, Total Shrink Amount, Shrink as a percentage of Sales, Total Theft Count, Total Theft Amount and Theft as a percentage of Sales of individual associates to identify which of their key attributes influence their shrinkage and theft.

This model takes the binned variables one at a time for Total Shrinkage and Theft Count or Value or percentage of Sales as the target variable of an Adaptive Bayes Network (ABN) and Decision Tree (DT) model and discovers rules described in terms of associate attributes.

## Target Variables for the Associate Loss Analysis Model

The rules are designed to be generated monthly. Therefore, eighteen ABN models and eighteen DT models are created every month across all the associates using the following variables as targets in this order:

1. Total Shrink Count Quartile (TSCQR)
2. Total Shrink Count Quintile (TSCQN)
3. Total Shrink Count Decile (TSCDE)
4. Total Shrink Amount Quartile (TSAQR)
5. Total Shrink Amount Quintile (TSAQN)
6. Total Shrink Amount Decile (TSADE)
7. Shrink as a percentage of Sales Quartile (STSQR)
8. Shrink as a percentage of Sales Quintile (STSQN)
9. Shrink as a percentage of Sales Decile (STSDE)
10. Total Theft Count Quartile (TTCQR)
11. Total Theft Count Quintile (TTCQN)
12. Total Theft Count Decile (TTCDE)
13. Total Theft Amount Quartile (TTAQR)
14. Total Theft Amount Quintile (TTAQN)
15. Total Theft Amount Decile (TTADE)
16. Theft as a percentage of Sales Quartile (TTSQR)
17. Theft as a percentage of Sales Quintile (TTSQN)
18. Theft as a percentage of Sales Decile (TTSDE)

## Source Variables for the Associate Loss Analysis Model

The following attributes of associates are identified from the data warehouse tables as source variables for the models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Year
- Month
- Employee Id

- Designation Name
- Designation Title
- Designation Level
- Nationality
- Gender
- Marital Status
- Age
- Net Income
- Demographics Code
- Title
- Total Months of Job
- Employee Type
- Correspondence Language
- Disability Indicator
- Rehire Recommendation Indicator
- HR Based Salary Eligibility Indicator
- Overtime Hours Salary Eligibility Indicator
- Commission Eligibility Indicator
- SPIFF Allowed Flag
- Total Hours Worked
- Total Overtime Hours
- Total Shrink Count Quartile (Target)
- Total Shrink Count Quintile (Target)
- Total Shrink Count Decile (Target)
- Total Shrink Amount Quartile (Target)
- Total Shrink Amount Quintile (Target)
- Total Shrink Amount Decile (Target)
- Shrink as a percentage of Sales Quartile (Target)
- Shrink as a percentage of Sales Quintile (Target)
- Shrink as a percentage of Sales Decile (Target)
- Total Theft Count Quartile (Target)
- Total Theft Count Quintile (Target)
- Total Theft Count Decile (Target)
- Total Theft Amount Quartile (Target)
- Total Theft Amount Quintile (Target)
- Total Theft Amount Decile (Target)
- Theft as a percentage of Sales Quartile (Target)

- Theft as a percentage of Sales Quintile (Target)
- Theft as a percentage of Sales Decile (Target)

### **Columns Included in the Target Views of the Associate Loss Analysis Model Report**

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

The Model Signature Target View outlines the attribute structure of the model (built using an ABN or DT algorithm). The Model Signature Target View contains the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)
- Attribute Type

### **Associate Sales Analysis Model**

This model addresses the business problem of profiling associate characteristics to sales, cost, and profit patterns.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Associate Sales Analysis Model

This section provides examples of the desired rules.

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---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---

---

### Desired Rules Example 1

```
IF
ASSOCIATE IS NOT ELIGIBLE FOR SPIFF
AND
ASSOCIATE IS ELIGIBLE FOR SALARY
AND
ASSOCIATE IS NOT ELIGIBLE FOR COMMISSION
THEN
ASSOCIATE PROFIT IS THE LOWEST
```

### Desired Rules Example 2

```
IF
ASSOCIATE IS ELIGIBLE FOR SPIFF
AND
ASSOCIATE IS NOT ELIGIBLE FOR SALARY
AND
ASSOCIATE IS NOT ELIGIBLE FOR COMMISSION
THEN
ASSOCIATE PROFIT IS THE HIGHEST
```

## What the Discovered Rules of the Associate Sales Analysis Model Explain

The discovered rules provide correlations between associate (employee) characteristics and their sales, cost, and profit profiles.

## What the Associate Sales Analysis Model Mines

This model mines the various attributes of associates. It takes the binned variables one at a time for Sales, Costs, and Profits as the target variable of an Adaptive Bayes

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Network (ABN) and Decision Tree (DT) model with a single feature and discovers rules described in terms of associate attributes.

## Target Variables for the Associate Sales Analysis Model

The rules are designed to be generated monthly. Therefore, nine ABN models and nine DT models are created every month across all the associates using the following variables as targets in this order:

1. Sales Amount Quartile (SAQR)
2. Sales Amount Quintile (SAQN)
3. Sales Amount Decile (SADE)
4. Cost Amount Quartile (CAQR)
5. Cost Amount Quintile (CAQN)
6. Cost Amount Decile (CADE)
7. Profit Amount Quartile (PADR)
8. Profit Amount Quintile (PAQN)
9. Profit Amount Decile (PADE)

## Source Variables for the Associate Sales Analysis Model

The following attributes of associates are identified from the data warehouse tables as source variables for the models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Year
- Month
- Employee Id
- Designation Name
- Designation Title
- Designation Level
- Nationality
- Gender
- Marital Status
- Age
- Net Income
- Demographics Code
- Title
- Total Months of Job
- Employee Type
- Correspondence Language
- Disability Indicator

- Rehire Recommendation Indicator
- HR Based Salary Eligibility Indicator
- Overtime Hours Salary Eligibility Indicator
- Commission Eligibility Indicator
- SPIFF Allowed Flag
- Total Hours Worked
- Total Overtime Hours

## Columns Included in the Target Views of the Associate Sales Analysis Model Report

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Year (PK)
- Analysis Desc
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and is also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)

- Performance Measure
- Attribute Name (PK)
- Attribute Type

## Customer Category Mix Analysis Model

This model addresses the business problem of discovering product categories that are frequently bought by customers. The model is used to understand the Categories purchased by a Customer in a typical transaction in terms of the components like the Categories in the Basket, Target Category in a Basket and additional information like Basket Significance (Sales Value), Target Category Significance (Sales Value) which are generated from regular Customer Transactional data.

Using Oracle Data Mining, the KPIs are modeled with the APRIORI algorithm utilised by the Association Rules model. The model type used for Association Rules with Apriori Algorithm is APASS. This model type is an example of Unclassified Learning since the Categories (or Target Category) which constitute the Category Basket are not inferred or guided (as part of data preparation) but are generated by the model itself.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Customer Category Mix Analysis Model

This section provides examples of the desired rules.

---



---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---



---

### Desired Rules Example 1

```
IF
CUSTOMER HAS BOUGHT 'BABY', 'GRAB AND GO'
THEN
CUSTOMER IS LIKELY TO BUY 'PACKAGED BEVERAGES' (11 Support: 36%, Probability:56%)
```

Category Basket Significance of ('BABY', 'GRAB AND GO', 'PACKAGED BEVERAGES') is 45% of Sales Value => The Sales from the 3 categories in Category Basket ('BABY', 'GRAB AND GO', 'PACKAGED BEVERAGES') account for 45% of the Total Sales across all categories in that particular store.

The Category Basket Significance (Sales Value) KPI allows us to filter out Rules which may be insignificant from a Basket Sales Value perspective.

Target Category Significance of ('PACKAGED BEVERAGES') is 60% of the Basket Sales Value => The Sales from the Target Category ('PACKAGED BEVERAGES') account for 60% of the Total Sales from the Category Basket ('BABY', 'GRAB AND GO', 'PACKAGED BEVERAGES') in that particular store.

The Target Category Significance (Sales Value) KPI allows us to filter out Rules determining insignificant Customer Purchases (insignificant Target Category). In other words, it helps us to extract Rules which relate to significant Customer Purchases, where the Target Category is significant within the Basket of Categories (from a Sales

Value perspective). Identifying this information is useful from a campaign/promotion/upsell perspective.

### Desired Rules Example 2

```
IF  
CUSTOMER HAS BOUGHT 'FLORAL', 'PHARMACY', 'HOT FOODS'  
THEN  
CUSTOMER IS LIKELY TO BUY 'BABY' (Support: 36%, Probability: 62%)'
```

## What the Discovered Rules for the Customer Category Mix Analysis Model Explain

The discovered rules explain customer behavior and buying patterns regarding various product categories. They help indicate the groups of product categories that sell well together, for example:

- The chances of a customer buying a BABY product increases from 11% to 62% if that customer purchases FLORAL and HOT FOODS products. This Rule is 28% significant in terms of Basket Value (Sales Value - all 3 categories in Basket) and The Target Category (BEAUTY) significance is about 75% of the Basket.
- The chances of a customer buying a BEAUTY product is 34% if that customer has purchased a product from categories 'HEALTH', 'MAGAZINES' and 'PHARMACY'. This Rule is about 66% significant in terms of Basket Value (Sales Value of all 4 categories in Basket) and The Target Category (BEAUTY) significance is about 45% of the Basket.
- BEAUTY products are very rarely sold together (about 3% of the time) with LIQUOR and AUTOMOTIVE PRODUCTS.

The significance of a rule can be measured in terms of support and confidence and a host of additional supporting measures; for example, Basket Significance (Value), Target Category Significance (Value), Basket Significance (Customers), Target Category Significance (Customers), Basket Significance (Transactions), Target Category Significance (Transactions), and so on..

## What the Customer Category Mix Analysis Model Mines

This model mines the monthly purchases of individual customers and discovers rules about the categories that are frequently bought in groups by customers.

## Target Variables for the Customer Category Mix Analysis Model

The purchase patterns are designed to be generated monthly for each individual store. Therefore, the APASS models are created every month for each store.

## Source Variables for the Customer Category Mix Analysis Model

The following item attributes are the source variables:

- Case Id Alt (PK)
- Store ID
- Year
- Month
- ID

- Name
- Value

---



---

**Note:** If the mining must be performed at multiple levels, such as category, subcategory, item, there may be multiple source tables.

---



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## Columns Included in the Target Views for the Customer Category Mix Analysis Model Report

The mined patterns and rules are visible through the target view CUST\_CATEGORY\_MIX\_APASS\_RULES with the following columns and can be displayed in an OBIEE report:

- STORE\_ID - Store ID
- YEAR - Year
- MONTH - Month
- MODEL\_NAME - Model Name (CCM\_MDL\_APASS\_<Store\_ID>)
- MODEL\_TYPE - Model Type (APASS)
- MODEL\_TYPE\_DESC - Model Description (Apriori Association)
- ANALYSIS\_NAME - Analysis Name (CUST\_CATEGORY\_MIX)
- ANALYSIS\_DESC - Analysis Description (Customer Category Mix Analysis)
- RULE\_ID - Rule Id .. IF (antecedent) THEN (consequent) END
- RULE\_ANTECEDENT\_ITEMS - List of Categories making up the IF part of the Category Basket (1 upto max as specified in settings while building the model)
- RULE\_CONSEQUENT\_ITEMS - List of Categories making up the THEN part of the Category Basket (usually 1 category)
- RULE\_SUPPORT - Support (number of cases in the input dataset which pertain to the current basket)
- RULE\_CONFIDENCE - Confidence (Probability of the THEN part of the Rule coming true based on input dataset)
- RULE\_DISPLAY\_ORDER - Default or recommended display order of the rules. Critical for DT models. Not critical for APASS models.
- RULE\_LENGTH - Number of Categories in the antecedent (IF) part of the Rule
- BSKT\_CTGRY\_COUNT - Number of categories in the Category Basket (includes antecedent and consequent)
- BSKT\_ALL\_SLS\_VAL - Sales Value (total) for all categories in the Category Basket
- BSKT\_ALL\_SLS\_UNITS - Sales Units (total) for all categories in the Category Basket
- BSKT\_ALL\_TRX\_COUNT - Transaction Count for all categories in the Category Basket
- BSKT\_ALL\_CUST\_COUNT - Customer Count for all categories in the Category Basket

- BSKT\_ALL\_SLS\_VAL\_SIGN - Significance of Category Basket within Store per Sales Value ..... ratio of Basket Sales Value to Store wide Sales Value (all categories)
- BSKT\_ALL\_SLS\_UNITS\_SIGN - Significance of Category Basket within Store per Sales Units ..... ratio of Basket Sales Units to Store wide Sales Units (all categories)
- BSKT\_ALL\_TRX\_COUNT\_SIGN - Significance of Category Basket within Store per Transaction Count.. ratio of Basket Transaction Count to Store wide Transaction Count (all categories)
- BSKT\_ALL\_CUST\_COUNT\_SIGN - Significance of Category Basket within Store per Customer Count.....ratio of Basket Customer Count to Store wide Customer Count (all categories)
- BSKT\_ALL\_AVG\_SLS\_VAL\_TRX - Avg Sales Value per Transaction (within Category Basket)
- BSKT\_ALL\_AVG\_SLS\_VAL\_CUST - Avg Sales Value per Customer (within Category Basket)
- BSKT\_ALL\_AVG\_SLS\_UNITS\_TRX - Avg Sales Units per Transaction (within Category Basket)
- BSKT\_ALL\_AVG\_SLS\_UNITS\_CUST - Avg Sales Units per Customer (within Category Basket)
- BSKT\_TGT\_SLS\_VAL - Sales Value of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_SLS\_UNITS - Sales Units of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_TRX\_COUNT - Transaction Count of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_CUST\_COUNT - Customer Count of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_SLS\_VAL\_SIGN - Significance of the Target Category within Category Basket per Sales Value ..... ratio of Target Category Sales Value to Basket Sales Value (all categories in Basket)
- BSKT\_TGT\_SLS\_UNITS\_SIGN - Significance of the Target Category within Category Basket per Sales Units ..... ratio of Target Category Sales Units to Basket Sales Units (all categories in Basket)
- BSKT\_TGT\_TRX\_COUNT\_SIGN - Significance of the Target Category within Category Basket per Transaction Count ..... ratio of Target Category Transaction Count to Basket Transaction Count (all categories in Basket)
- BSKT\_TGT\_CUST\_COUNT\_SIGN - Significance of the Target Category within Category Basket per Customer Count ..... ratio of Target Category Transaction Count to Basket Customer Count (all categories in Basket)
- BSKT\_TGT\_AVG\_SLS\_VAL\_TRX - Avg Sales Value per Transaction (Target Category .. consequent category /THEN part of RULE)
- BSKT\_TGT\_AVG\_SLS\_VAL\_CUST - Avg Sales Value per Customer (Target Category .. consequent category /THEN part of RULE)
- BSKT\_TGT\_AVG\_SLS\_UNITS\_TRX - Avg Sales Units per Transaction (Target Category .. consequent category /THEN part of RULE)

- BSKT\_TGT\_AVG\_SLS\_UNITS\_CUST - Avg Sales Units per Customer (Target Category .. consequent category /THEN part of RULE)
- STR\_ALL\_SLS\_VAL - Sales Value (total) for all categories in Store
- STR\_ALL\_SLS\_UNITS - Sales Units (total) for all categories in Store
- STR\_ALL\_TRX\_COUNT - Transaction Count for all categories in Store
- STR\_ALL\_CUST\_COUNT - Customer Count for all categories in Store

## Customer Loyalty Analysis Model

This model addresses the business problem of discovering the impact of customer characteristics on customers' loyalty to a store.

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Customer Loyalty Analysis Model

This section provides examples of the desired rules.

---



---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---



---

### Desired Rules Example 1

```
IF
YEARS OF RESIDENCE IS (8 - 10)
AND
HOUSEHOLD_SIZE IS (3+)
THEN
CUSTOMER IS GROUP A
```

### Desired Rules Example 2

```
IF
YEARS OF RESIDENCE IS (1 ñ 3)
AND
HOUSEHOLD_SIZE IS (LESS THAN 3)
THEN
CUSTOMER IS GROUP E
```

## What the Discovered Rules for the Customer Loyalty Analysis Model Explain

The discovered rules help explain the loyalty of a customer.

## What the Customer Loyalty Analysis Model Mines

This model mines the Customer and Account demographic characteristics of Customers to identify the key attribute influencing the Customer Loyalty scores (RFMP Category Value).

## Target Variable for the Customer Loyalty Analysis Model

The rules are designed to be generated monthly. Therefore, one ABN model and one DT model is created every month across all stores combined using the Customer Loyalty variable as the target.

## Source Variables for the Customer Loyalty Analysis Model

The following attributes of customers are identified from the data warehouse tables as source variables for the models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Year
- Month
- Customer Number
- Registered as Gift Receiver
- Registered as Gift Giver
- Customer Occasion Type This Month
- Campaign This Month
- Membership Account Type Code (None if the customer does not have any account; the last used account if the customer has multiple accounts)
- Life-To-Date Points
- Available Points
- Customer Account Type (None if the customer does not have any account; the last used account if the customer has multiple accounts)
- Customer Identity Required Indicator
- Customer Identity Type Name
- Customer Group Code (None if the customer does not belong to any group)
- Age
- Marital Status
- Gender
- Income
- Race
- Education
- Profession
- Household Size
- Years of Residence

- Demography Group Name
- Customer County or District
- Customer City
- Customer State
- Customer Country
- Customer World Region

### Loyalty Categories for the Customer Loyalty Analysis Model

The RFMP algorithms provide functionality to group customers into quartiles, deciles, and quintiles. Each customer falls into one of the following five loyalty categories based on the RFMP quintile he or she belongs to in a particular month:

- Group A (RFMP Quintile 5)
- Group B (RFMP Quintile 4)
- Group C (RFMP Quintile 3)
- Group D (RFMP Quintile 2)
- Group E (RFMP Quintile 1)

---



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**Note:** The definition of each of the loyalty types as well as the number of loyalty types may vary with each implementation.

---



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### Columns Included in the Target Views for the Customer Loyalty Analysis Model Report

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and is also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)
- Attribute Type

## Frequent Shopper Category Mix Analysis Model

This model addresses the business problem of finding product categories that are frequently bought by frequent shoppers. Finding these product categories can help in optimizing Merchandising and Category Mix options that relate to Store Layout, Display and Frontage, Promotional Campaigns, Co-branding, and others.

The model is used to understand the Categories purchased by a Frequent Shopper in a typical transaction in terms of the components like the Categories in the Basket, Target Category in a Basket and additional information like Basket Significance (Sales Value), Target Category Significance (Sales Value) which are generated from regular Customer Transactional data.

Using Oracle Data Mining, the KPIs are modeled with the APRIORI algorithm utilised by the Association Rules model. The model type used for Association Rules with Apriori Algorithm is APASS. This model type is an example of Unclassified Learning since the Categories (or Target Category) which constitute the Category Basket are not inferred or guided (as part of data preparation) but are generated by the model itself.

## Examples of Desired Rules for the Frequent Shopper Category Mix Analysis Model

This section provides examples of the desired rules.

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---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---

---

### Desired Rules Example 1

```
IF
CUSTOMER HAS BOUGHT 'FILM ACCESSORIES'
THEN
CUSTOMER IS LIKELY TO BUY 'BEAUTY' [Support - 80%, Confidence - 70%]
```

**Desired Rules Example 2**

```

IF
CUSTOMER HAS BOUGHT 'FILM ACCESSORIES'
AND
CUSTOMER HAS BOUGHT 'MAGAZINE'
AND
CUSTOMER HAS BOUGHT 'PET'
THEN
CUSTOMER IS LIKELY TO BUY 'BEAUTY' [Support - 48%, Confidence - 82%]

```

Category Basket Significance of ('FILM ACCESSORIES', 'MAGAZINES', 'PET', 'BEAUTY') is 62% of Sales Value => The Sales from the 4 categories in Category Basket ('FILM ACCESSORIES', 'MAGAZINES', 'PET', 'BEAUTY') account for 62% of the Total Sales across all categories in that particular store.

The Category Basket Significance (Sales Value) KPI allows us to filter out Rules which may be insignificant from a Basket Sales Value perspective.

Target Category Significance of (BEAUTY) is 70% of the Basket Sales Value => The Sales from the Target Category ('BEAUTY') account for 70% of the Total Sales from the Category Basket ('FILM ACCESSORIES', 'MAGAZINES', 'PET', 'BEAUTY') in that particular store.

The Target Category Significance (Sales Value) KPI allows us to filter out Rules determining insignificant Customer Purchases (insignificant Target Category). In other words, it helps us to extract Rules which relate to significant Customer Purchases, where the Target Category is significant within the Basket of Categories (from a Sales Value perspective). Identifying this information can be useful from a campaign/promotion/upsell perspective.

**Desired Rules Example 3**

```

IF
CUSTOMER HAS BOUGHT 'BAKERY'
THEN
CUSTOMER IS LIKELY TO BUY 'BEAUTY' [Support - 36%, Confidence - 90%]

```

**What the Discovered Rules for the Frequent Shopper Category Mix Analysis Model Explain**

The discovered rules help explain purchase patterns of frequent shoppers, for example:

- The chances of a frequent shopper buying a BEAUTY product increases from 30% to 70% if he or she purchases a FILM ACCESSORIES product. It further increases to 74% if the frequent shopper buys a MAGAZINES product and to 82% if he or she also buys a PET product.
- The chances of a customer buying a BEAUTY product is 82% if he or she has purchased a product from categories 'FILM ACCESSORIES', 'MAGAZINES' and 'PET'. This Rule is about 62% significant in terms of Basket Value (Sales Value of all 4 categories in Basket) and The Target Category (BEAUTY) significance is about 70% of the Basket.
- BEAUTY products are very rarely (about 3% of the time) sold with BAKERY products.

The significance of a rule can be measured in terms of support and confidence and a host of additional supporting measures like Basket Significance (Value), Target

Category Significance (Value), Basket Significance (Customers), Target Category Significance (Customers), Basket Significance (Transactions), Target Category Significance (Transactions), and so on.

## What the Frequent Shopper Category Mix Analysis Model Mines

This model mines the monthly purchases of individual frequent shoppers and discovers rules about the categories that are frequently bought in groups by frequent shoppers.

## Target Variable for the Frequent Shopper Category Mix Analysis Model

The purchase patterns are designed to be generated monthly for each individual store. Therefore, APASS models are created every month for each store.

## Source Variables for the Frequent Shopper Category Mix Analysis Model

The following item attributes are the source variables:

- Case Id Alt (PK)
- Store ID
- Year
- Month
- ID
- Name
- Value

---

---

**Note:** If the mining must be performed at multiple levels, such as category, subcategory, item, and others, there may be multiple source tables.

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## Columns Included in the Target Views of the Frequent Shopper Category Mix Analysis Model Report

The mined patterns and rules are visible through the target view `FS_CATEGORY_MIX_APASS_RULES` with the following columns and can be displayed in an OBIEE report:

- `STORE_ID` - Store ID
- `YEAR` - Year
- `MONTH` - Month
- `MODEL_NAME` - Model Name (`CCM_MDL_APASS_<Store_ID>`)
- `MODEL_TYPE` - Model Type (APASS)
- `MODEL_TYPE_DESC` - Model Description (Apriori Association)
- `ANALYSIS_NAME` - Analysis Name (`CUST_CATEGORY_MIX`)
- `ANALYSIS_DESC` - Analysis Description (Customer Category Mix Analysis)
- `RULE_ID` - Rule Id .. IF (antecedent) THEN (consequent) END
- `RULE_ANTECEDENT_ITEMS` - List of Categories making up the IF part of the Category Basket (1 upto max as specified in settings while building the model)

- RULE\_CONSEQUENT\_ITEMS - List of Categories making up the THEN part of the Category Basket (usually 1 category)
- RULE\_SUPPORT - Support (number of cases in the input dataset which pertain to the current basket)
- RULE\_CONFIDENCE - Confidence (Probability of the THEN part of the Rule coming true based on input dataset)
- RULE\_DISPLAY\_ORDER - Default or recommended display order of the rules. Critical for DT models. Not critical for APASS models.
- RULE\_LENGTH - Number of Categories in the antecedent (IF) part of the Rule
- BSKT\_CTGRY\_COUNT - Number of categories in the Category Basket (includes antecedent and consequent)
- BSKT\_ALL\_SLS\_VAL - Sales Value (total) for all categories in the Category Basket
- BSKT\_ALL\_SLS\_UNITS - Sales Units (total) for all categories in the Category Basket
- BSKT\_ALL\_TRX\_COUNT - Transaction Count for all categories in the Category Basket
- BSKT\_ALL\_CUST\_COUNT - Customer Count for all categories in the Category Basket
- BSKT\_ALL\_SLS\_VAL\_SIGN - Significance of Category Basket within Store per Sales Value ..... ratio of Basket Sales Value to Store wide Sales Value (all categories)
- BSKT\_ALL\_SLS\_UNITS\_SIGN - Significance of Category Basket within Store per Sales Units ..... ratio of Basket Sales Units to Store wide Sales Units (all categories)
- BSKT\_ALL\_TRX\_COUNT\_SIGN - Significance of Category Basket within Store per Transaction Count.. ratio of Basket Transaction Count to Store wide Transaction Count (all categories)
- BSKT\_ALL\_CUST\_COUNT\_SIGN - Significance of Category Basket within Store per Customer Count.....ratio of Basket Customer Count to Store wide Customer Count (all categories)
- BSKT\_ALL\_AVG\_SLS\_VAL\_TRX - Avg Sales Value per Transaction (within Category Basket)
- BSKT\_ALL\_AVG\_SLS\_VAL\_CUST - Avg Sales Value per Customer (within Category Basket)
- BSKT\_ALL\_AVG\_SLS\_UNITS\_TRX - Avg Sales Units per Transaction (within Category Basket)
- BSKT\_ALL\_AVG\_SLS\_UNITS\_CUST - Avg Sales Units per Customer (within Category Basket)
- BSKT\_TGT\_SLS\_VAL - Sales Value of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_SLS\_UNITS - Sales Units of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_TRX\_COUNT - Transaction Count of Target Category (consequent category /THEN part of RULE)
- BSKT\_TGT\_CUST\_COUNT - Customer Count of Target Category (consequent category /THEN part of RULE)

- BSKT\_TGT\_SLS\_VAL\_SIGN - Significance of the Target Category within Category Basket per Sales Value ..... ratio of Target Category Sales Value to Basket Sales Value (all categories in Basket)
- BSKT\_TGT\_SLS\_UNITS\_SIGN - Significance of the Target Category within Category Basket per Sales Units ..... ratio of Target Category Sales Units to Basket Sales Units (all categories in Basket)
- BSKT\_TGT\_TRX\_COUNT\_SIGN - Significance of the Target Category within Category Basket per Transaction Count ..... ratio of Target Category Transaction Count to Basket Transaction Count (all categories in Basket)
- BSKT\_TGT\_CUST\_COUNT\_SIGN - Significance of the Target Category within Category Basket per Customer Count ..... ratio of Target Category Transaction Count to Basket Customer Count (all categories in Basket)
- BSKT\_TGT\_AVG\_SLS\_VAL\_TRX - Avg Sales Value per Transaction (Target Category .. consequent category /THEN part of RULE)
- BSKT\_TGT\_AVG\_SLS\_VAL\_CUST - Avg Sales Value per Customer (Target Category .. consequent category /THEN part of RULE)
- BSKT\_TGT\_AVG\_SLS\_UNITS\_TRX - Avg Sales Units per Transaction (Target Category .. consequent category /THEN part of RULE)
- BSKT\_TGT\_AVG\_SLS\_UNITS\_CUST - Avg Sales Units per Customer (Target Category .. consequent category /THEN part of RULE)
- STR\_ALL\_SLS\_VAL - Sales Value (total) for all categories in Store
- STR\_ALL\_SLS\_UNITS - Sales Units (total) for all categories in Store
- STR\_ALL\_TRX\_COUNT - Transaction Count for all categories in Store
- STR\_ALL\_CUST\_COUNT - Customer Count for all categories in Store

## Item Basket Analysis Model

This model addresses the business problem of identifying the extent to which item (product) characteristics influence the items' sales KPIs.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Item Basket Analysis Model

This section provides examples of the desired rules.

---



---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---



---

### Desired Rules Example 1

```
IF
FOOD STAMP is allowed
AND
ENVIRONMENT TYPE CODE is (NORMAL)
AND
Item Basket Analysis Report
Data Mining Reports 6-21
FREQUENT_SHOPPER_POINTS (800 - 999)
THEN
AVERAGE BASKET VALUE is (HIGHEST)
```

### Desired Rules Example 2

```
IF
FOOD STAMP is NOT allowed
AND
ENVIRONMENT TYPE CODE is (REFRIGERATED)
AND
FREQUENT_SHOPPER_POINTS (800 - 999)
THEN
AVERAGE BASKET VALUE is (LOWEST)
```

## What the Discovered Rules for the Item Basket Analysis Model Explain

The discovered rules draw the profile of items that have the extreme values of the target KPI. For example, the Examples of Desired Rules for this model discover the profiles of items showing extreme average basket values.

## What the Item Basket Analysis Model Mines

This model identifies which key attributes of an item influence the number of baskets sold, average basket value, and size in a particular store. This model mines the various attributes of items. It takes the binned variables one at a time for Total Basket Count, Average Basket Value, and Average Basket Size as the target variable of an ABN model and DT model with a single feature and discovers rules described in terms of item characteristics.

## Target Variable for the Item Basket Analysis Model

The rules are designed to be generated monthly for each individual store. Therefore, nine ABN and nine DT models are created every month for each store using the following variables as targets in this order:

1. Total Basket Count Quartile (TBCQR)
2. Total Basket Count Quintile (TBCQN)
3. Total Basket Count Decile (TBCDE)
4. Average Basket Value Quartile (ABVQR)

5. Average Basket Value Quintile (ABVQN)
6. Average Basket Value Decile (ABVDE)
7. Average Basket Size Quartile (ABSQR)
8. Average Basket Size Quintile (ABSQN)
9. Average Basket Size Decile (ABSDE)

## Source Variables for the Item Basket Analysis Model

The following item attributes are identified from the data warehouse tables as source variables for the ABN and DT models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Store ID
- Year
- Month
- Item ID
- Brand Name
- Category Name
- Department Name
- Customer Pickup Type Code
- Discount Indicator
- Environment Type Code
- Hazardous Material Type Code
- Perishable Indicator
- Kit Set Code
- Order Collection Code
- Price Audit Flag
- Sale Weight or Unit Count Code
- Security Required Type Code
- Sell Unit Landed Cost Amount
- Sell Unit Last Received Base Cost Amount
- Sell Unit Last Received Net Cost Amount
- Item Sale Unit Price Amount
- Shrink Flag
- Substitute Identified Indicator
- Swell Flag
- Item Usage Code
- Vendor Item Number
- Max Shipping Capability

- Min Order Quantity
- Sale Unit per Packet Unit Count
- Shipping Capability Units
- Store Order Allowed Flag
- Store Receipt Allowed Flag
- Style Description
- Terms Code
- Vendor Number
- Vendor Class Code
- Buy Status Indicator
- Credit Limit Offered
- Inform Government Indicator
- Vendor Number of Years in Business
- Pay Status Indicator
- Competitor Retail Item Name
- Competitor Name
- Competitor Item Local Advertising Flag
- Competitor Item On Promotion Flag
- Competitor Item Promotion Store Coupon Indicator
- Competitor Sale Unit Price Amount
- Allow Coupon Multiply Indicator
- Allow Food Stamp Indicator
- Coupon Restricted Indicator
- Electronic Coupon Flag
- Employee Discount Allowed Flag
- Frequent Shopper Points
- Frequent Shopper Points Eligibility Indicator
- Give Away Flag
- Item Tender Restriction Group Code
- Manufacturer
- Manufacturer Family Code
- Maximum Sale Unit Count
- Price Entry Required Flag
- Prohibit Repeat Key Flag
- Prohibit Return Flag
- Selling Status Code
- Visual Verify Price Flag

- Weight Entry Required Flag

## Columns Included in the Target Views for the Item Basket Analysis Model Report

The mined patterns and rules are visible through in a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Store ID (PK)
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and is also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)
- Attribute Type

## Item POS Loss Analysis Model

This model addresses the business problem of building a profile of item (product) characteristics regarding POS losses.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

**See:** *Oracle Retail Data Model Operations Guide* for a sample report based on this model.

## Examples of Desired Rules for the Item POS Loss Analysis Model

This section provides examples of the desired rules.

---



---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---



---

### Desired Rules Example 1

```
IF
EMP_DISCOUNT_ALLOWED_IND IS 'Y'
AND
SCANNED_PER_UNITS_SOLD IS (0.8-1)
THEN
THEFT_AMOUNT_TO_SALES_AMOUNT_QUARTILE IS THE HIGHEST
```

### Desired Rules Example 2

```
IF
SCANNED_PER_UNITS_SOLD IS (0.8-1)
AND
DEPARTMENT_NAME In ('BEVERAGE', 'CIGARETTES')
THEN
SHRINK_AMOUNT_TO_SALES_AMOUNT_QUARTILE IS THE HIGHEST
```

## What the Discovered Rules for the Item POS Loss Analysis Model Explain

The discovered rules describe correlations between item shrinkage and item characteristics.

## What the Item POS Loss Analysis Model Mines

This model mines the POS transactions along with the item attributes to identify their impact on Total Shrink Count, Total Shrink Amount, Shrink as a percentage of Sales, Total Theft Count, Total Theft Amount, and Theft as a percentage of Sales.

## Target Variables for the Item POS Loss Analysis Model

The rules are designed to be generated monthly for each individual store. Therefore, eighteen ABN and eighteen DT models are created every month for each of the stores using the following variables as targets in this order:

1. Total Shrink Count Quartile (TSCQR)
2. Total Shrink Count Quintile (TSCQN)
3. Total Shrink Count Decile (TSCDE)
4. Total Shrink Amount Quartile (TSAQR)
5. Total Shrink Amount Quintile (TSAQN)
6. Total Shrink Amount Decile (TSADE)
7. Shrink as a percentage of Sales Quartile (STSQR)
8. Shrink as a percentage of Sales Quintile (STSQN)
9. Shrink as a percentage of Sales Decile (STSDE)
10. Total Theft Count Quartile (TTCQR)
11. Total Theft Count Quintile (TTCQN)
12. Total Theft Count Decile (TTCDE)
13. Total Theft Amount Quartile (TTAQR)
14. Total Theft Amount Quintile (TTAQN)
15. Total Theft Amount Decile (TTADE)
16. Theft as a percentage of Sales Quartile (TTSQR)
17. Theft as a percentage of Sales Quintile (TTSQN)
18. Theft as a percentage of Sales Decile (TTSDE)

## Source Variables for the Item POS Loss Analysis Model

The following attributes of POS and items are identified from the data warehouse tables as source variables for the models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Store
- Year
- Month
- Item ID
- Brand Name
- Category Name
- Department Name
- Customer Pickup Type Code
- Discount Indicator
- Hazardous Material Type Code
- Perishable Indicator

- Kit Set Code
- Order Collection Code
- Price Audit Flag
- Sale Weight or Unit Count Code
- Security Required Type Code
- Sell Unit Landed Cost Amount
- Sell Unit Last Received Base Cost Amount
- Sell Unit Last Received Net Cost Amount
- Item Sale Unit Price Amount
- Shrink Flag
- Substitute Identified Indicator
- Swell Flag
- Item Usage Code
- Vendor Item Number
- Max Shipping Capability
- Min Order Quantity
- Sale Unit per Packet Unit Count
- Shipping Capability Units
- Store Order Allowed Flag
- Store Receipt Allowed Flag
- Style Description
- Terms Code
- Vendor Number
- Vendor Class Code
- Buy Status Indicator
- Credit Limit Offered
- Inform Government Indicator
- Vendor Number of Years in Business
- Pay Status Indicator
- Competitor Retail Item Name
- Competitor Name
- Competitor Item Local Advertising Flag
- Competitor Item On Promotion Flag
- Competitor Item Promotion Store Coupon Indicator
- Competitor Sale Unit Price Amount
- Allow Coupon Multiply Indicator
- Allow Food Stamp Indicator

- Coupon Restricted Indicator
- Electronic Coupon Flag
- Employee Discount Allowed Flag
- Frequent Shopper Points
- Frequent Shopper Points Eligibility Indicator
- Give Away Flag
- Item Tender Restriction Group Code
- Manufacturer
- Manufacturer Family Code
- Maximum Sale Unit Count
- Price Entry Required Flag
- Prohibit Repeat Key Flag
- Prohibit Return Flag
- Selling Status Code
- Visual Verify Price Flag
- Weight Entry Required Flag

**Retail Transaction Attributes**

- Total Number of Retail Transactions For Item
- Total Amount of Retail Transactions For Item
- Average Amount Per Retail Transaction For Item
- Number of Distinct Currency Used For Item
- Total Units Sold For Item
- Average Units Sold Per Retail Transaction For Item
- Total Idle Interval For Item (This attribute is the sum of idle intervals of all transactions that contain this Item)
- Average Idle Interval Per Retail Transaction For Item
- Total Ring Interval For Item (This attribute is the sum of ring intervals of all transactions that contain this item)
- Average Ring Interval Per Retail Transaction For Item
- Total Tender Interval For Item (This attribute is the sum of tender intervals of all transactions that contain this item)
- Average Tender Interval Per Retail Transaction For Item
- Total Lock Interval For Item (This attribute is the sum of lock intervals before or after all transactions that contain this item)
- Average Lock Interval Per Retail Transaction For Item
- Total Line Items Scanned For Item (This attribute is the total number of times this item is scanned)
- Average Line Items Scanned Per Units Sold For Item

- Total Line Items Keyed For Item (This attribute is the total number of times this item is keyed)
- Average Line Items Keyed Per Units Sold
- Total Key Department Count For Item (This attribute is the total number of times this item is keyed by the department)
- Average Key Department Count Per Units Sold
- Total Service Charge For Item
- Average Service Charge Per Retail Transaction For Item
- Total Tax Amount For Item
- Average Tax Amount Per Retail Transaction For Item
- Total Number of Voided Transactions For Item
- Average Number of Voided Transactions Per Retail Transaction For Item
- Total Amount of Voided Transactions For Item
- Average Amount of Voided Transactions Per Retail Transaction For Item
- Average Amount of Voided Transaction as Percentage of Total Retail Transaction Amount For Item
- Total Number of Discount Line Items For Item
- Average Number of Discount Line Items Per Retail Transaction For Item
- Total Amount of Discount Line Items For Item
- Average Amount of Discount Line Items Per Retail Transaction For Item
- Average Amount of Discount Line Items as Percentage of Total Retail Transaction Amount For Item
- Total Number of Return Line Items For Item
- Average Number of Return Line Items Per Retail Transaction For Item
- Total Amount of Return Line Items For Item
- Average Amount of Return Line Items Per Retail Transaction For Item
- Average Amount of Return Line Items as Percentage of Total Retail Transaction Amount For Item
- Total Number of Miscellaneous Fee Line Items For Item
- Average Number of Miscellaneous Fee Line Items Per Retail Transaction For Item
- Total Amount of Miscellaneous Fee Line Items For Item
- Average Amount of Miscellaneous Fee Line Items Per Retail Transaction For Item
- Average Amount of Miscellaneous Fee Line Items as Percentage of Total Retail Transaction Amount For Item
- Total Number of Promotional Line Items For Item
- Average Number of Promotional Line Items Per Retail Transaction For Item
- Total Amount of Promotional Line Items For Item
- Average Amount of Promotional Line Items Per Retail Transaction For Item

- Average Amount of Promotional Line Items as Percentage of Total Retail Transaction Amount For Item
- Total Number of Deposit Redemption Line Items For Item
- Average Number of Deposit Redemption Line Items Per Retail Transaction For Item
- Total Amount of Deposit Redemption Line Items For Item
- Average Amount of Deposit Redemption Line Items Per Retail Transaction For Item
- Average Amount of Deposit Redemption Line Items as Percentage of Total Retail Transaction Amount For Item

**Control Transaction Attributes**

- Total Tax Exempt Transaction Count For Item
- Average Tax Exempt Transaction Count Per Retail Transaction For Item
- Tax Exempt Total Amount For Item
- Average Tax Exempt Amount Per Retail Transaction For Item
- Tax Exempt Total Amount as a Percentage of Total Retail Transaction Amount For Item
- Item
- Total Number of Store Coupons For Item
- Average Number of Store Coupons Per Retail Transaction For Item
- Average Number of Store Coupons Per Retail Transaction For Item
- Total Amount of Store Coupons For Item
- Average Amount of Store Coupons Per Retail Transaction For Item
- Average Amount of Store Coupons as Percentage of Total Retail Transaction Amount For Item
- Total Markdown Count For Item
- Average Markdown Count per Retail Transaction For Item
- Markdown Total Amount For Item
- Average Markdown Amount Per Retail Transaction For Item
- Average Markdown Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Employee Discount Count For Item
- Average Employee Discount Per Retail Transaction For Item
- Total Employee Discount Amount For Item
- Average Employee Discount Amount Per Retail Transaction For Item
- Average Employee Discount Amount as a Percentage of Retail Transaction Amount For Item
- Total Weighed Line Item Count For Item
- Average Weighed Line Item Count Per Retail Transaction For Item

- Total Weighed Line Item Amount For Item
- Average Weighed Line Item Amount Per Retail Transaction For Item
- Average Weighed Line Item Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Layaway Payments Collected Count For Item
- Average Layaway Payments Collected Count Per Retail Transaction For Item
- Total Layaway Payments Collected Amount For Item
- Average Layaway Payments Collected Amount Per Retail Transaction For Item
- Average Layaway Payments Collected Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Container Deposit Count For Item
- Average Container Deposit Count Per Retail Transaction For Item
- Total Container Deposit Amount For Item
- Average Container Deposit Amount Per Retail Transaction For Item
- Average Container Deposit Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Redeemed Container Deposit Count For Item
- Average Redeemed Container Deposit Count Per Retail Transaction For Item
- Total Redeemed Container Deposit Amount For Item
- Average Redeemed Container Deposit Amount Per Retail Transaction For Item
- Average Redeemed Container Deposit Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Cash Tender Count For Item
- Average Cash Tender Count Per Retail Transaction For Item
- Total Cash Tender Amount For Item
- Average Cash Tender Amount Per Retail Transaction For Item
- Average Cash Tender Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Check Tender Count For Item
- Average Check Tender Count Per Retail Transaction For Item
- Total Check Tender Amount For Item
- Average Check Tender Amount Per Retail Transaction For Item
- Average Check Tender Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Credit Card Tender Count For Item
- Average Credit Card Tender Count Per Retail Transaction For Item
- Total Credit Card Tender Amount For Item

- Average Credit Card Tender Amount Per Retail Transaction For Item
- Average Credit Card Tender Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Debit Card Tender Count For Item
- Average Debit Card Tender Count Per Retail Transaction For Item
- Total Debit Card Tender Amount For Item
- Average Debit Card Tender Amount Per Retail Transaction For Item
- Average Debit Card Tender Amount as a Percentage of Total Retail Transaction Amount For Item
- Total Customer Account Tender Count For Item
- Average Customer Account Tender Count Per Retail Transaction For Item
- Total Customer Account Tender Amount For Item
- Average Customer Account Tender Amount Per Retail Transaction
- Average Customer Account Tender Amount as a Percentage of Total Retail Transaction Amount
- Total Gift Certificate Tender Count For Item
- Average Gift Certificate Tender Count Per Retail Transaction For Item
- Total Gift Certificate Tender Amount For Item
- Average Gift Certificate Tender Amount Per Retail Transaction For Item
- Amount For Item
- Total Coupon Tender Count For Item
- Average Coupon Tender Count Per Retail Transaction For Item
- Total Coupon Tender Amount For Item
- Average Coupon Tender Amount Per Retail Transaction For Item
- Average Coupon Tender Amount as a Percentage of Total Retail Transaction Amount For Item

### **Columns Included in the Target Views of the Item POS Loss Analysis Model Report**

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Store ID (PK)
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)

- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and is also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)
- Attribute Type

## POS Flow Analysis Model

This model addresses the business problem of detecting patterns in the flow of items, transactions, and amount across individual points of sale during different time periods.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

## Examples of Desired Rules for the POS Flow Analysis Model

This section provides examples of the desired rules.

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---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---

---

### Desired Rules Example 1

```
IF
NUMBER_OF_HOUSEHOLDS IS<3000
AND
STORE LOCATION TYPE IS 'Free Standing'
AND
PER CAPITA INCOME IS<3000
THEN
Total Return Items Count Quartile IS THE LOWEST
```

### Desired Rules Example 2

```
IF
NUMBER_OF_HOUSEHOLDS IS>5000
AND
AVERAGE_DRIVE_TIME_MIN IS<15
AND
(STORE_USAGE IS 'Store Within a Store' OR STORE_USAGE IS 'Department')
AND
STORE_OPEN_HOURS IS>=16
THEN
Total Sale Transactions Count Quartile IS THE HIGHEST
```

## What the Discovered Rules for the POS Flow Analysis Model Explain

The discovered rules describe the influence of trade area demographic characteristics and store characteristics on the amount of POS traffic at individual workstations over different periods throughout the day.

## What the POS Flow Analysis Model Mines

This model mines the various attributes of Store and Location. It takes the binned variables one at a time for Transaction Type, Transaction Count, and Transaction Amount (Sales) as the target variable of an ABN model and DT model with a single feature and discovers rules described in terms of Store, Location, and State Demographic attributes.

## Target Variables for the POS Flow Analysis Model

The rules are generated from the historical data across all time periods and store workstations. A total of twenty-seven ABN and twenty-seven DT models with a single feature are created using the following variables as targets in this order:

1. Total Sale Transactions Count Quartile (TSTCQR)
2. Total Sale Transactions Count Quintile (TSTCQN)
3. Total Sale Transactions Count Decile (TSTCDE)
4. Total Return Transactions Count Quartile (TRTCQR)
5. Total Return Transactions Count Quintile (TRTCQN)
6. Total Return Transactions Count Decile (TRTCDE)

7. Total Void Transactions Count Quartile (TVTCQR)
8. Total Void Transactions Count Quintile (TVTCQN)
9. Total Void Transactions Count Decile (TVTCDE)
10. Total Sale Items Count Quartile (TSICQR)
11. Total Sale Items Count Quintile (TSICQN)
12. Total Sale Items Count Decile (TSICDE)
13. Total Return Items Count Quartile (TRICQR)
14. Total Return Items Count Quintile (TRICQN)
15. Total Return Items Count Decile (TRICDE)
16. Total Void Items Count Quartile (TVICQR)
17. Total Void Items Count Quintile (TVICQN)
18. Total Void Items Count Decile (TVICDE)
19. Total Sale Amount Quartile (TSAQR)
20. Total Sale Amount Quintile (TSAQN)
21. Total Sale Amount Decile (TSADE)
22. Total Return Amount Quartile (TRAQR)
23. Total Return Amount Quintile (TRAQN)
24. Total Return Amount Decile (TRADE)
25. Total Void Amount Quartile (TVAQR)
26. Total Void Amount Quintile (TVAQN)
27. Total Void Amount Decile (TVADE)

### Source Variables for the POS Flow Analysis Model

The following attributes of store workstation and time periods are identified from the data warehouse tables as source variables for the ABN and DT models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Store Workstation ID
- Workstation Name
- POS Type
- Equipment Type
- Manufacturer Name
- Terminal Model Number
- Terminal Type (POS register, Goods receipt terminal, and others)
- Outside Indicator
- Store Name
- Store Manager Name
- Store Usage (Store, Store within a store, Department, Kiosk, and others)

- Store Status (Under construction, New, and others)
- Total Open Hours
- Store Location Type (Free standing, Shopping Center, CBD, SBD, NBD, and others)
- Primary Trade Area Code
- Trade Area Coverage
- Market Area Code
- Market Area Type (Urban, Suburban, Rural, and others)
- Market Area Population
- Pull Factor
- Total Commuter Population
- Peak Season Population
- Tourist Population
- Average Drive Time
- Number of Households
- Average Household Size
- Average Family Size
- Per Capita Income
- Average Number of Vehicles per Household
- Shopping Center Type (Strip Center, Mall, and others)
- Store Concept (Convenience, General Merchandise, Fashion oriented, and others)
- Terrain (Mountain, Inland, Desert)
- Total Built-up Area
- Total Super Built-up Area
- Number of Functional Months
- Usable Area
- Inventory Area
- Selling Area
- New Store Indicator
- Store Price Index
- Number of Levels of Floors
- Number of Window Displays
- Area of Window Displays
- Fitting Rooms Available
- Number of External Signs
- Rest Rooms Available
- Type Of Parking

- Distance to Nearest Cross
- Distance from Market Area Center
- Store County or District
- Store City
- Store State or Province
- State Population
- State Sales
- Store Country
- Store World Region
- Date Time Key
- Hour of Day (1-24)
- Calendar Day of Week (Sun-Sat)
- Calendar Day of Month (1-30 or 31)
- Holiday Indicator
- Weekend Indicator
- Calendar Week Number
- Fiscal Week Number
- Advertising Week Number
- Planning Week Number
- Calendar Half Month Number
- Fiscal Half Month Number
- Calendar Month Number
- Fiscal Month Number
- Advertising Period Number
- Planning Period Number
- Calendar Quarter Number
- Fiscal Quarter Number
- Advertising Quarter Number
- Planning Quarter Number
- Calendar Half Year Number
- Fiscal Half Year Number
- Calendar Year Number
- Fiscal Year Number
- Advertising Year Number
- Planning Year Number

## Columns Included in the Target Views of the POS Flow Analysis Model Report

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and is also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)
- Attribute Type

## Store Loss Analysis Model

This model addresses the business problem of building a profile of organization (store) characteristics regarding shrinkage.

The KPIs are converted into categorical variables using standard database binning operations. The categorical variables are modeled as a classification model to identify or predict the impact of various independent variables (attributes) on the dependent target variable (KPI - categorical).

Using Oracle Data Mining, the KPIs are modeled using two popular Classification Algorithms - Adaptive Bayes Network (ABN) and Decision Tree (DT).

Adaptive Bayes Network (ABN) algorithm is used to build a fast scalable model with scalable rules whereas the Decision Tree (DT) algorithm is used when explicit rules explaining predictions are needed.

## Examples of Desired Rules for the Store Loss Analysis Model

This section provides examples of the desired rules.

---



---

**Note:** Discovery rules are parsed to make them easier to read (replacing the Column or Attribute names with descriptions), removing keywords or phrases like "isIn" with "=", "AND" with "and", and so on.

---



---

### Desired Rules Example 1

```
IF
STORE IS NEW
and
NUMBER OF WINDOW DISPLAYS IS (4 - 5)
and
STORE DEPARTMENT IS (RETURN)
THEN
STORE THEFT AMOUNT IS THE HIGHEST
```

### Desired Rules Example 2

```
IF
STORE IS NEW
and
NUMBER OF WINDOW DISPLAYS IS (4 - 5)
and
STORE DEPARTMENT IS (GIFT)
THEN
STORE THEFT AMOUNT IS THE LOWEST
```

## What the Discovered Rules for the Store Loss Analysis Model Explain

The discovered rules describe correlations between shrinkage and store characteristics.

## What the Store Loss Analysis Model Mines

This analysis identifies the extent to which key store characteristics influence shrinkage and theft. This model mines the various attributes of stores. It takes the binned variables one at a time for Shrink and Thefts as the target variable of an ABN model and DT model with a single feature and discovers rules described in terms of store attributes.

## Target Variables for the Store Loss Analysis Model

The rules are designed to be generated monthly. Therefore, eighteen ABN and eighteen DT models are created every month across all stores using the following variables as targets in this order:

1. Total Shrink Count Quartile (TSCQR)

2. Total Shrink Count Quintile (TSCQN)
3. Total Shrink Count Decile (TSCDE)
4. Total Shrink Amount Quartile (TSAQR)
5. Total Shrink Amount Quintile (TSAQN)
6. Total Shrink Amount Decile (TSADE)
7. Shrink as a percentage of Sales Quartile (STSQR)
8. Shrink as a percentage of Sales Quintile (STSQN)
9. Shrink as a percentage of Sales Decile (STSDE)
10. Total Theft Count Quartile (TTCQR)
11. Total Theft Count Quintile (TTCQN)
12. Total Theft Count Decile (TTCDE)
13. Total Theft Amount Quartile (TTAQR)
14. Total Theft Amount Quintile (TTAQN)
15. Total Theft Amount Decile (TTADE)
16. Theft as a percentage of Sales Quartile (TTSQR)
17. Theft as a percentage of Sales Quintile (TTSQN)
18. Theft as a percentage of Sales Decile (TTSDE)

## Source Variables for the Store Loss Analysis Model

The following attributes of associates are identified from the data warehouse tables as source variables for the ABN and DT models (note that a few of these variables are unique identifiers and are treated as supplementary variables):

- Case Id Alt (PK)
- Year
- Month
- Store ID
- Store Name
- Store Manager Name
- Store Usage (Store, Store within a store, Department, Kiosk, and others)
- Store Status (Under construction, New, and others)
- Total Open Hours
- Store Location Type (Free standing, Shopping Center, CBD, SBD, NBD, and others)
- Primary Trade Area Code
- Trade Area Coverage
- Market Area Code
- Market Area Type (Urban, Suburban, Rural, and others)
- Market Area Population

- Pull Factor
- Total Commuter Population
- Peak Season Population
- Tourist Population
- Average Drive Time
- Number of Households
- Average Household Size
- Average Family Size
- Per Capita Income
- Average Number of Vehicles per Household
- Shopping Center Type (Strip Center, Mall, and others)
- Store Concept (Convenience, General Merchandise, Fashion oriented, and others)
- Terrain (Mountain, Inland, Desert)
- Total Built-up Area
- Total Super Built-up Area
- Number of Functional Months
- Usable Area
- Inventory Area
- Selling Area
- New Store Indicator
- Store Price Index
- Number of Levels of Floors
- Number of Window Displays
- Area of Window Displays
- Fitting Rooms Available
- Number of External Signs
- Rest Rooms Available
- Type Of Parking
- Distance to Nearest Cross
- Distance from Market Area Center
- Store County or District
- Store City
- Store State or Province
- State Population
- State Sales
- Store Country
- Store World Region

## Columns Included in the Target Views for the Store Loss Analysis Model Report

The mined patterns and rules are visible through a target view with the following columns and can be displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Rule ID (PK)
- Performance Measure
- Measure Value
- Associate Profile
- Prediction Count
- Record Count
- Support
- Confidence
- Rule Display Order

A new target view representing the Model Signature outlining the attribute structure of the model (built using an ABN or DT algorithm) is also available.

The Model Signature Target View contains the following columns and is also displayed in an OBIEE report:

- Analysis Name (PK)
- Analysis Desc
- Year (PK)
- Month (PK)
- Model Type
- Model Type Desc
- Model Name (PK)
- Performance Measure
- Attribute Name (PK)
- Attribute Type

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# Index

## A

---

aggregate entities, 2-100  
aggregate tables, 3-35  
Associate Basket Analysis Model, 6-2  
Associate Loss Analysis Model, 6-6  
Associate Sales Analysis Model, 6-9

## B

---

base entities.  
    *See* entities, Oracle Retail Data Model  
base tables.  
    *See* tables, Oracle Retail Data Model

## C

---

Customer Category Mix Analysis Model, 6-13  
Customer Loyalty Analysis Model, 6-17

## D

---

data mining in Oracle Retail Data Model  
    models. *See* Oracle Retail Data Model  
        data mining models  
        reports, 6-1  
database sequences, 3-22  
derived entities, 2-90  
derived tables, 3-32, 5-3

## E

---

entities, Oracle Retail Data Model  
    aggregate, 2-100  
    base, 2-62  
    derived, 2-90  
    logical, 2-1  
    lookup, 2-41  
    mapping to tables, 4-1

## F

---

Frequent Shopper Category Mix Analysis  
    Model, 6-20

## I

---

intra-ETL, Oracle Retail Data Model  
    executing, 5-2  
    scripts, 5-2, 5-7  
Item Basket Analysis Model, 6-24  
Item POS Loss Analysis Model, 6-29

## L

---

logical data model, 2-1  
logical entities, 2-1  
logical to physical mapping, 4-1  
lookup entities, 2-41  
lookup tables, 3-21

## M

---

mappings  
    logical to physical, 4-1  
materialized views, Oracle Retail Data Model  
    intra-ETL scripts, 5-7  
mining source table  
    population, 5-28  
model build procedures, 5-30  
    output, 5-30  
    parameters, 5-30  
model procedures  
    output, 5-30

## O

---

OLAP component, Oracle Retail Data Model  
    cubes in, 3-48  
    dimensions in, 3-44  
OLAP cubes  
    relational views of, 3-59  
Oracle Retail Data Model  
    about, 1-1  
    data mining models *See* Oracle Retail Data Model  
        data mining models  
    logical data model, 2-1  
    physical data model, 3-1  
Oracle Retail Data Model data mining models  
    Associate Basket Analysis Model, 6-2  
    Associate Loss Analysis Model, 6-6  
    Associate Sales Analysis Model, 6-9

Customer Category Mix Analysis Model, 6-13  
Customer Loyalty Analysis Model, 6-17  
discovery rule parsing, 6-3, 6-6, 6-10, 6-13, 6-17,  
6-20, 6-25, 6-29, 6-38, 6-43  
Frequent Shopper Category Mix Analysis  
Model, 6-20  
Item Basket Analysis Model, 6-24  
Item POS Loss Analysis Model, 6-29  
POS Flow Analysis Model, 6-37  
Store Loss Analysis Model, 6-42  
target views for, 3-42

## **P**

---

physical data model, 3-1  
POS Flow Analysis Model, 6-37

## **R**

---

reference entities.  
    *See* entities, Oracle Retail Data Model  
relational views  
    of OLAP cubes, 3-59  
reports, Oracle Retail Data Model  
    data mining, 6-1

## **S**

---

sequences, database, 3-22  
Store Loss Analysis Model, 6-42

## **T**

---

tables, Oracle Retail Data Model  
    aggregate, 3-35, 5-1  
    database sequences, 3-22  
    derived, 3-32, 5-1, 5-3  
    lookup, 3-21  
    mapped from logical entities, 4-1  
    populating, 5-1  
    reference, 3-2