

# Oracle® Utilities Data Model

Release Notes

Release 11.4.1

E48731-06

December 2016

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**See also:**

readme files included in the Oracle Utilities Data Model code.

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This document outlines new features for Release 11.4.1 of Oracle Utilities Data Model. It also contains important information that was not included in the documentation for Release 11.4.1 of Oracle Utilities Data Model.

This document may be updated after it is released. To check for updates to this document and to view other Oracle documentation, refer to the Database section on the Web site:

[docs.oracle.com](http://docs.oracle.com)

This document contains the following topics:

## Features Release 11.4.1

Describes the new features of the release.

Oracle Utilities Data Model Release 11.4.1 provides the following:

- Certification on Oracle Database 11g Release 2 (11.2.0.4.0)
- 3rd Normal Form (3NF) Data Model with transaction level access; the first data warehouse built based on the IEC Common Information Model (CIM) standards for utilities.
- Three-layered data warehouse architecture to support a scalable business intelligence solution.
- Comprehensive metadata for business intelligence reporting and ad-hoc query
- Physical data model with industry specific measurements; Over 670 tables with over 4,800 columns; and 1,300 industry-specific measurements and 80 KPIs.
- Sample Star Schema, OLAP Cubes and Analytical Models for ease of implementation.
- Industry specific sample use cases for customer extensions.

## New Features Release 11.3.1

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Describes the new features of the release.

Oracle Utilities Data Model Release 11.3.1 provides the following:

### **Support for Billing and Revenue Management Adapter**

Oracle Utilities Data Model Release 11.3.1 added support for the Oracle Communications Billing and Revenue Management Adapter for Oracle Communications Data Model (BRM Adapter). The BRM Adapter provides a pre-built integration to feed data from specific Oracle Communications Billing and Revenue Management application tables to Oracle Utilities Data Model.

### **Data Model Extensions and Changes**

#### **New Physical Tables and Corresponding Logical Data Model Entities**

[Table 1-1](#) (page 2) shows the new tables in Oracle Utilities Data Model Release 11.3.1.

Lookup table changes and extensions: this includes the addition of lookup tables to make the definition of code clearer and define, in one place only throughout the model certain entities such as: type of account role, religion, and of product coverage.

Reference table additions: The reference table Customer Community is added to take into account the increasing importance of social networking, out of Social Network Analysis or SNA, either from Internet or from the call behavior (A-B number analysis). Several communities can be defined per Customer.

Invoice Status history allows the tracing of the changes of the billing process.

Contracts has been extended with a specific EVENT and with Installment contract. The later covers the requirements associated to those specific contracts.

Service Level Agreement (SLA) analysis has been extended with a table that collects any violation over time.

Some subject areas in analytics were extended in Prepaid and balance tracing in general.

**Table 1-1 Table and Logical Data Model Additions**

<b>Table and Logical Data Model Additions</b>	
<b>Table Name</b>	<b>Logical Data Model Entity Name</b>
DWB_EVT_CNRT	EVENT CONTRACT
DWB_INSTMNT_CNRT	INSTALLMENT CONTRACT
DWB_INVC_STAT_HIST	INVOICE STATUS HISTORY
DWB_SRVC_LVL_AGRMNT_VILTN	SERVICE LEVEL AGREEMENT VIOLATION
DWD_ACCT_BAL_MO	ACCOUNT BALANCE MONTH DRVD
DWD_PRPD_ACCT_ACTVTN_DAY	PREPAID ACCOUNT ACTIVATION DAY DRVD
DWD_PRPD_VCHR_RCHRГ_DAY	PREPAID VOUCHER RECHARGE DAY DRVD

**Table 1-1 (Cont.) Table and Logical Data Model Additions**

Table Name	Logical Data Model Entity Name
DWD_TMF_KPI	See "TM Forum Business Metric Automation Certification (page 3)"
DWD_TMF_KPI_ENTRY_RESULT	See "TM Forum Business Metric Automation Certification (page 3)"
DWL_ACCT_RL_TYP	ACCOUNT ROLE TYPE
DWL_INVC_STAT_TYP	INVOICE STATUS TYPE
DWL_PROD_COVRG_AREA_TYP	PRODUCT COVERAGE AREA TYPE
DWL_RELGN	RELIGION
DWR_CUST_COMMUNITY	CUSTOMER COMMUNITY

**Changed Physical Tables and corresponding Logical Data Model Entities**

In Release 11.3.1, some tables were renamed for clarity. [Table 1-2](#) (page 3) shows the renamed Physical Tables.

**Table 1-2 Renamed Physical Tables**

Renamed Physical Tables		
Old Name	New Name	LDM Entity
DWD_SBRP_CHRN_STTST C	DWD_SBRP_STTSTC	SUBSCRIPTION STATISTIC DRVD
DWA_SBRP_CHRN_STTST C_MO	DWA_SBRP_STTSTC_MO	SUBSCRIPTION STATISTIC MONTH AGGR
DWL_PROD_MKT_PLN_BR ND	DWL_PROD_BRND	PRODUCT BRAND

**TM Forum Business Metric Automation Certification**

Oracle Utilities Data Model Release 11.3.1 has been certified with the TM Forum's Business Metric Automation (BMA) initiative. Oracle Utilities Data Model has been certified with the following BMA metric groups:

- Billing Calculation (BICal)
- Billing Inquiry, Dispute & Adjustment (BIDA)
- Billing Collection Management (BCM)
- Billing Receivables Management (BRM)
- Fulfillment Customer Order Management (COM)

- Fulfillment Service Order Management (SOM)
- Service Level Agreement Management (SLA)

Service Providers participating in TM Forum benchmark studies can now use Oracle Utilities Data Model to calculate the various metrics for these categories and automatically submit the resulting data to TM Forum. A set of scripts are provided to facilitate the data submission to TMF. Additional information can be found on the TM Forum website at:

<https://www.tmforum.org/conformance-certification/>

### Using the TMF Benchmark Scripts

To create the required TMF Benchmark tables, do the following:

1. Create the tables DWD\_TMF\_KPI and DWD\_TMF\_KPI\_ENTRY\_RESULT:

```
create table dwd_tmf_kpi(
  batchid number(10),
  company varchar2(255),
  product varchar2(255),
  serviceproviderid number(10,0),
  researchstream_name varchar2(255),
  study_name varchar2(255),
  metric_name varchar2(255),
  datapoint_name varchar2(255),
  detail0 varchar2(255),
  detail1 varchar2(255),
  detail2 varchar2(255),
  entry varchar2(255),
  batchid number(10));

create table dwd_tmf_kpi_entry_result(
  "COMPANY"          VARCHAR2(255 BYTE),
  "PRODUCT"          VARCHAR2(255 BYTE),
  "SERVICEPROVIDERID"  NUMBER(10,0),
  "RESEARCHSTREAM_NAME" VARCHAR2(255 BYTE),
  "STUDY_NAME"        VARCHAR2(255 BYTE),
  "METRIC_NAME"       VARCHAR2(255 BYTE),
  "DATAPOINT_NAME"    VARCHAR2(255 BYTE),
  "DETAIL0"           VARCHAR2(255 BYTE),
  "DETAIL1"           VARCHAR2(255 BYTE),
  "DETAIL2"           VARCHAR2(255 BYTE),
  "ENTRY"             VARCHAR2(255 BYTE),
  "BATCHID"           NUMBER(10,0),
  "STATUS"            VARCHAR2(20 BYTE),
  "MESSAGE"           varchar2(255))
```

To Run the TMF Benchmark scripts, do the following:

1. Unzip the supplied tmfclient.zip file (this is in the directory \$ORACLE\_HOME/ocdm/utl/tmf\_kpi/).
2. Go to directory TMFClient.
3. Run the command:

```
java TMFMain [location of config file] [batchid]
```

Create a config file with the following parameters and save it as the parameters for step three. This file should be a plain text file:

```
##content of config file start
USERNAME=ocdm_db_username
PASSWORD=ocdm_db_password
URL=jdbc:oracle:thin:@//localhost:1521/orcl
INPUTDIR=C:\Projects\TMF\input
OUTPUTDIR=C:\Projects\TMF\output
TMFUSERNAME=g433304
TMFPASSWORD=4t153246R
##content of config file end
```

### **New Data Mining Model for Prepaid Churn Prediction**

In previous releases Oracle Utilities Data Model included a single data mining model to be used for predicting churn for both prepaid or postpaid subscribers. In Release 11.3.1 these data mining models are included as two separate mining models, which provide greater applicability for the specific subscriber type.

### **PL/SQL Implementation of Intra-ETL**

In Release 11.3.1 the intra-ETL available with Oracle Utilities Data Model are all written in PL/SQL. By default the intra-ETL are scheduled using OWB workflow, alternatively you can call the intra-ETL jobs using Oracle Data Integrator, or another scheduling or ETL tool.

### **Known Issues**

Lists the known issues in this release and where possible, provides a workaround for the known issue.

This release has the following known issues:

#### **Shiphome Installation on Oracle Database 12c Release 1 Fails at Prerequisite Check**

Installing Oracle Utilities Data Model on Oracle Database 12c Release 1 fails at prerequisite check step.

This issue is documented in Bug 17586642.

#### **Workarounds**

There are two workarounds for this in case Oracle Database 12c:

1. When you run the installer, use the `-ignorePrereq` command line option.
2. Create a symlink for `libvsn11.a` as below:

```
$ cd $OH/lib/
$ ln -s libvsn12.a libvsn11.a
```

Once the prereqs are done and the user reaches the summary page, delete the symlink using the command `rm libvsn11.a`.

#### **Fully Configured Oracle Utilities Data Model Requires More Space than Reported by Oracle Installer**

When installing Oracle Utilities Data Model, the Oracle Installer reports *only* the amount of space required for copying the Oracle Utilities Data Model files (that is, 240MB).

However, a fully-installed and configured Oracle Utilities Data Model also requires space for the Database files created during the post-install configuration of Oracle Utilities Data Model.

If insufficient space is available for the Oracle Utilities Data Model Database files, the Oracle Utilities Data Model installation fails during configuration.

This issue is documented in Bug 13243223.

### **Workaround**

Before installing and configuring Oracle Utilities Data Model, ensure that at least 3 GB is available.

### **Some OLAP Reports Have Errors When You Change Default Values**

This error occur when changing the default values. For example in the reports: Event Analysis and Usage point Analysis, when you choose '2000 MAR' at Event Analysis, the error shows:

```
Odbc driver returned an error (SQLExecDirectW).
Error Details
Error Codes:
OPR4ONWY:U9IM8TAC:OI2DL65P
State: HY000. Code: 10058.
[NQODBC] [SQL_STATE: HY000] [nQSError: 10058] A general error has occurred.
[nQSError: 43113] Message returned from OBIS. [nQSError: 43119] Query Failed:
[nQSError: 59137] Filter level CLNDR_MO is below the projected level CLNDR_YR
on dimension TIME while an externally aggregated measure is present. (HY000)
SQL Issued: SELECT s_0, s_1, s_2,
s_3, s_4, s_5, s_6, s_7, s_8 FROM ( SELECT 0 s_0,
.
.
.
```

This issue is documented in Bug 17586358.

### **Workaround:**

Reports work fine with default values.

### **Meter Data / TOU Usage Trend Reports: totals should not be filtered**

The Meter Data and TOU Usage Trend reports show incorrect totals.

This issue is documented in Bug 17584565.

### **Workaround:**

There is no workaround for this issue.

### **Need to Improve Performance for pkg\_dwd\_acct\_arrer\_mo**

Performance of the package for pkg\_dwd\_acct\_arrer\_mo needs to be improved.

This issue is documented in Bug 17420802.

**Workaround:**

There is no workaround for this issue.

**Missing Measures and Entities in Metadata Reports**

Not all entities are shown in Metadata Reports; each entity should show in a subject area and a business area.

This issue is documented in Bug 17415854.

**Workaround:**

There is no workaround for this issue.

**Deinstall Warning Message can be Ignored**

**Bug 13601107 deinstall warning error in the deinstall log file**

The following warning message, or messages similar to the following message can be ignored on deinstall:

```
WARNING: Error while copying directory
//dbhome_1/inventory with exclude file list
'/tmp/OraInstall2012-01-11_02-37-25PM/installExcludeFile.lst' to nodes

. /logs/installActions2012-01-11_02-37-25PM.log'

. for details. You may fix the errors on the required remote nodes
Refer to the install guide for error recovery.
This deinstallation was successful
End of deinstallations
```

**RPD Warning Messages**

A number of warning messages appear in the RPD included in Oracle Utilities Data Model. The warning messages do not impact any of the out-of-the-box reports included with Oracle Utilities Data Model.

**Documentation Changes**

Describes documentation changes for this release.

The Oracle Utilities Data Model documentation set for this release consists of the manuals in the previous release

The following books includes updates:

**Documentation Accessibility**

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

**Access to Oracle Support**

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E48731-06

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