Oracle Utilities Meter Data Management Business Intelligence

Metric Reference Guide

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Oracle Utilities Meter Data Management Business Intelligence Metric Reference Guide

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Contents

Preface

This document describes the Oracle Utilities Meter Data Analytics metrics (such as dashboards, analyses, and subject areas) available in Oracle Utilities Advanced Spatial and Operational Analytics. These metrics are used in the pre-built analyses, and/or available for customers to use via Oracle Answers in building new analyses or extending existing analyses.

Audience

This guide is intended for all users of Oracle Utilities Meter Data Management Business Intelligence.

Related Documents

For more information, see the following documents:

- *Oracle Utilities Advanced Spatial and Operational Analytics Installation Guide*
- *Oracle Utilities Advanced Spatial and Operational Analytics Quick Install Guide*
- *Oracle Utilities Advanced Spatial and Operational Analytics Administration Guide*
- *Oracle Utilities Advanced Spatial and Operational Analytics Release Notes*
- *Oracle Utilities Advanced Spatial and Operational Analytics User's Guide*

Oracle Utilities Business Intelligence Documentation Library:

- *Oracle Utilities Business Intelligence Quick Install Guide*
- *Oracle Utilities Business Intelligence Installation Guide*
- *Oracle Utilities Business Intelligence DBA Guide*
- *Oracle Utilities Business Intelligence User's Guide*

See Also:

- *Oracle Utilities Business Intelligence V2.4.0 Server Administration Guide*
- *Oracle Utilities Application Framework V4.1 Business Process Guide*
- *Oracle Utilities Application Framework V4.1 Administration Guide*
- Oracle Utilities Meter Data Management Documentation Library

Notational Conventions

The following notational conventions are used in this document:

Notation	Indicates
boldface	Graphical user interface elements associated with an action, terms defined in text, or terms defines in the glossary
italic	Book titles, emphasis, or placeholder variables for which you supply particular values
monospace	Commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter

Chapter 1

Dashboard Content Reference

This chapter describes the metrics available in Meter Data Analytics of Oracle Utilities Advanced Spatial and Operational Analytics. The analytics enable the customers in the Utilities market to monitor their meter data management.

Oracle Utilities Meter Data Management Business Intelligence provides the meter data analytics' content in the following dashboards:

- **Overview**
- **Device Activities**
- **Device Events**
- **Devices & Installations**
- **Performance**
- **Usage Details**
- **Usage Summary**
- **VEE Exceptions**

> **Note:** The data source indicator needs to be configured on the source application as mentioned in the section "Note for Data Source Indicator" in the *Oracle Utilities Advanced Spatial and Operational Analytics Administration Guide.*

Overview

The Overview dashboard presents an overall picture of the Oracle Utilities Meter Data Management (MDM) system showing all important KPIs to help users identify the overall state of the product. Each of the analyses drills down to the respective detailed dashboard page.

Click **Dashboards**, expand **Meter Data Analytics**, and then click **Overview** to access the dashboard.

Percent of Normal Intervals

The gauge shows the percentage of normal intervals that have been received. Click the gauge to drill down to the **Overview** page in the **Performance** dashboard.

> **Note**: This analysis is configured to select a default aggregation type from the database. If the analysis needs to be based on a different aggregation type, the appropriate aggregation type as available in the source Oracle Utilities Meter Data Management application needs to be set in the filter section.

Property	Value
Subject Area	MDM - Quality Count Fact
Measure	Normal Interval %

Percent of On-Time Intervals

The gauge shows the percentage of on-time intervals that have been received. Click the gauge to drill down to the **Overview** page in the **Performance** dashboard.

> **Note**: This answer is configured to select a default aggregation type from the database. If the report needs to be based on a different aggregation type, the appropriate aggregation type as available in the source Oracle Utilities Meter Data Management application needs to be set in the filter section.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	On-Time Intervals %

Usage Unreported for > 30 Days

This analysis provides a snapshot of unreported usage for more than 30 days. The graph shows the usage quantity per number of service points per month. Click the graph to drill down to the **Overview** page in the **Usage Summary** dashboard.

> **Note**: This analysis is configured to select a default Unit Of Measure (UOM) value from the database. If the analysis needs to be based on a different UOM value, the appropriate UOM code as available in the source Oracle Utilities Meter Data Management application needs to be set in its filter section.

Property	Value
Subject Area	MDM - SP Usage Transaction Fact
Measure	Usage Quantity

Exception Types

This analysis shows the count of top five VEE exceptions by type. The analysis shows only the top five exceptions and merges the remaining exceptions into one slice. If there are fewer than five, all the exceptions are shown as individual slices.

Click the graph to drill down to the **Overview** page in the **VEE Exceptions** dashboard.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	% of Total

Degree Days

This analysis shows the actual usage/load and heating/cooling degree days, for three months. Click the graph to drill down to the **Degree Days** page in the **Usage Details** dashboard.

> **Note**: This analysis is configured to select a default aggregation type from the database. If the analysis needs to be based on a different aggregation type, the appropriate aggregation type as available in the source Oracle Utilities Meter Data Management application needs to be set in the filter section.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Bar - Heating and cooling degree days Line - Usage

Initial Measurements with Exceptions

This analysis gives a snapshot of the total number of initial measurements that resulted into exceptions. Click the graph to drill down to the **Overview** page in the **VEE Exceptions** dashboard.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	% of Total

Devices Stopped Receiving Measurements

This analysis shows a summary of the devices that were sending measurements and then stopped for some reason, per aging buckets. Click the pie chart to drill down to the **Devices without Measurements** page in the **Devices & Installations** dashboard.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	Devices (shown as % distribution among the buckets)

Device Activity Distribution

This analysis shows a summary of device activities. Click the pie chart to drill down to the **Activity Analysis** page in the **Device Activities** dashboard.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Device Activity (Shown as % of Device Activities distribution for all Activity Types)

Tamper Events

This analysis shows the counts of tamper device events based on the event category. Click the graph to drill down to the **Overview** page in the **Device Events** dashboard.

> **Note**: To start viewing the data, this analysis should be configured to set the appropriate code for tamper events to be shown in the analysis. The appropriate Event Category code as available in the source Oracle Utilities Meter Data Management application needs to be set in the filter section of this analysis.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Events

Installed Smart Meters

This analysis shows the total number of smart devices installed and removed in a month. Click the graph to drill down to the **Device Status** page in the **Devices & Installations** dashboard.

Property	Value
Subject Area	MDM - Installation Event Fact
Measure	Installed Devices

Device Activities

The Device Activities dashboard provides the key performance indicators (KPIs) for the Oracle Utilities Meter Data Management device activities. This dashboard provides statistics on various commands issued to help utilities monitor the effectiveness of AMI systems and look for anomalies. These statistics may also be used for regulatory purposes, such as number of disconnects in a region and other activities like outage.

Click **Dashboards**, expand **Meter Data Analytics**, and then click **Device Activities** to access this dashboard.

Device Activities provides the following dashboard pages:

- **Overview**
- **Activity Trend**
- **Activity Analysis**
- **Activity Analysis Detail**
- **Activity Duration**

Overview

The Overview dashboard page displays the count of all Oracle Utilities Meter Data Management activities. This analysis provides a bird's eye view of the device activity distribution and the average completed activity duration based on the criteria you select.

You usually define generic criteria (such as calendar year and month, and activity type category) here before compiling the analysis.

Device Activities

This analysis provides a spatial representation of the count of device activities in a month per city.

Click the color-coded region on the map to view the count of device activities along with the city and state details. Click the **City, State** link to broadcast the City, State value to the **Activity Distribution** and **Activities by Month** analyses on the same page.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Activities

Activity Distribution

This analysis shows the distribution of device activities as different slices of a pie chart based on the selected slice option. The data is based on the city selected on the map. Use the drop down to display the data for a different city.

Click the **View By** drop down to slice the data by activity type, device type, head end system, manufacturer, or model. Click the pie chart to drill down to the **Activity Trend** or **Activity Analysis** dashboard pages for activity specific details.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Activities

Activities by Month

This analysis shows a 15-month trend on the count of device activities by city. It also shows the yearly average. The data displayed is based on the selected city on the map.

Use the drop down to display the data for a different city. Click the graph to drill down to the **Activity Trend** or **Activity Analysis** dashboard pages for activity specific details.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Activities (Bar), Yearly Average (Line)

Average Completion Time

Every activity has a span for completion - the start time and the end time. This analysis displays the average time (in hours) taken for activities of various activity types to be completed. Click the table link to drill down to the **Activity Duration** analysis for top activities duration for the selected activity type.

Users can also filter the results of this report further using the answer level filter for head end system.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Activities

Activity Trend

The Activity Trend dashboard page shows the activity trend for different attributes for the last 15 months.

Device Activity Trend

The stacked bar graph shows the trend in the total number of activities for the last 15 months. Each stack indicates the number of activities of a particular type. The bar graph on the right (with a slider on the top) gives a detailed view for each selected month.

Users can view this data with respect to specific dimension, such as device type, activity type, head end system, manufacturer and model by using the **View By** drop down provided.

Click the table link to drill down to the **Activity Analysis Detail** dashboard page for a granular view.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Device Activity

Activity Analysis

The Activity Analysis dashboard page provides a summary of the activities and their comparison across different dimensions.

Activity Analysis Summary

This analysis shows the number of activities associated with a combination of dimensions. It also indicates what percentage of total activities for the selected period does the selected combination contribute. The choices of dimensions are shown in the **View By** drop down.

Click **View By** to choose to slice the details by head end system, activity type, device type, manufacturer, model, geographical code, or city. The table adjusts the display columns according to the selection of dimensions.

Click the **Activities** table link to drill down to the **Activity Analysis Detail** dashboard page for a granular view.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Activity count

Activity Comparison

This analysis shows a comparison of the activity duration between the selected dimensional values based on the selected comparison dimension.

Click the **Comparison Dimension** drop down to compare the data by head end system, device type, service provider, manufacturer, model, or city. Click the table link to drill down to the **Activity Analysis Detail** page for activity specific details.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Activities, Average Completion Time

Activity Analysis Detail

This analysis displays the service point, device, and customer information associated with each activity. The table displays the top 100 records based on the number of activities. Click the link provided in the **Service Point/Device** columns to navigate to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected service point or device.

Users can click on the individual column links to initiate a drill back process to the source application.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Count of Activities

Activity Duration

This analysis displays the top 100 device activities with longest duration. Along with the activity type and duration, the analysis also provides information about device, service point, and customer associated with each activity.

Click the table link to drill back to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected device.

Property	Value
Subject Area	MDM - Device Activity Fact
Measure	Actual Activity Duration

Device Events

The Device Events dashboard provides key performance indicators (KPIs) for the Oracle Utilities Meter Data Management device events. The dashboard provides a snapshot of the various device related events ocurring across the metering system. Examples of these events include tamper alert, low battery, and outage. This information helps to identify problem devices, meter errors, and possible theft situations.

Click **Dashboards**, expand **Meter Data Analytics**, and then click **Device Events** to access these dashboards.

Device Events provides the following dashboard pages:

- **Overview**
- **Event Trend**
- **Event Analysis**
- **Event Analysis Detail**
- **Event and Exception Correlation**

Overview

The Overview dashboard page helps the user to identify the areas with higher device events across device categories.

Device Events

This analysis provides a spatial representation of the device event distribution for the selected city.

Click the color-coded region on the map to view the device event count in that region, along with the city and state details. Click the **City, State** link to broadcast the City, State value to the **Device Events Distribution** and **Device Events by Month** analyses on the same page.

Click the pie chart on the map to view the event count per event category in that region.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Device Events

Device Events Distribution

This analysis shows the distribution of device events as different slices of a pie based on the selected slice option. The data is based on the selected city on the map. Alternatively, use the **City, State** drop down to display the data for a different city.

Click the **View By** drop down to slice the data by event type, event category, device type, head end system, manufacturer, or model. Click the pie chart to drill down to the **Event Trend** or **Event Analysis** dashboard pages for event specific details.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Device Events

Device Events by Month

This analysis shows a 15-month trend on the number of device events by city. It also shows the yearly average. The data displayed is based on the city selected on the map.

Use the **City, State** drop down to display the data for a different city. Click the graph to drill down to the **Event Trend** or **Event Analysis** dashboard pages for event specific details.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Events (Bar), Yearly Average (Line)

Event Trend

The Event Trend dashboard page shows the event trend per event type for the last 15 months.

Event Distribution

This analysis displays two graphs - one showing the count of all device events per category for the last 15 months, and the other showing the number of events per month per category. Click **View By** to choose to slice the details by event category, event type, device type, head end system, manufacturer and model.

The table shows monthly details of activity distribution. Click the table link to drill down to the **Activity Analysis Detail** dashboard page for a granular view.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Event

Event Analysis

The Event Analysis dashboard page provides an overview of the device events.

Device Event Analysis Summary

This analysis shows the number of events for the selected period that are associated with a combination of dimensions. Click **View By** to choose the dimensions, such as head end system, activity type, device type, manufacturer, model, geographical code, or city.

Click the table link to drill down to the **Event Analysis Detail** dashboard page for a granular view.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Event

Device Event Comparison

This analysis shows a comparison of the device event count between the selected dimensional values based on the selected comparison dimension.

Click the **Comparison Dimension** drop down to compare the data by head end system, device type, service provider, manufacturer, model, or city. Click the table link to drill down to the **Event Analysis Detail** page for device event specific details.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Events, % of Total

Event Analysis Detail

This analysis displays the details of customer, service point, and device associated with each event. The table displays only the top 100 records. Click the table link to drill down to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected device.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Event

Event and Exception Correlation

The Event and Exception Correlation dashboard page helps the user to understand the correlation between device events and their VEE exceptions.

Top Device Events and Exceptions

This analysis shows a list of the service points with the highest number of events and exceptions. The table displays only the top 100 records.

The analysis identifies the commonly occurring patterns correlating events and exceptions, thus helping to take corrective measures. Click the table link to drill down to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected device.

Property	Value
Subject Area	MDM - Device Event Fact
Measure	Count of Events + Count of Exceptions

Devices & Installations

The Devices & Installations dashboard provides key performance indicators (KPIs) for the Oracle Utilities Meter Data Management device installations and removals. This dashboard gives a snapshot of the device status, installation status, on/off information, and commissioning status. Customers can use this information to identify problems and understand trends in their AMI infrastructure.

Click **Dashboards**, expand **Meter Data Analytics**, and then click **Devices & Installations** to access the dashboard.

Devices & Installations provides the following dashboard pages:

- **Overview**
- **Device Status**
- **Installation Trend**
- **Devices without Measurements**
- **Devices without Measurements Detail**

Overview

The Overview dashboard page provides an overview of the installed devices, helping in monitoring various device installations and removals. You can also have a spatial view of installed devices.

Installed Device Summary

This analysis shows the number and type of installed devices by geographic area. Click on the map for a summary of the devices installed in that city (a breakdown with total and percent). The data helps to identify the areas where smart meters are not installed yet.

Property	Value
Subject Area	MDM - Installation Summary Fact
Measure	Device Count

Installed Devices

This analysis shows the number of devices installed by type or category. The data highlights the distribution of installed devices across device type and device category over a period of two years.

The pie chart shows a comparison between year-on-year device installations. Click **View By** to choose to slice the details by device type and category. Click a table link to drill down to the **Installation Trend** dashboard page for a detailed view.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	Device Count

Device Status

The Device Status dashboard page displays the current status of the installed devices.

Device Status

This analysis shows the count of devices that are ON and/or OFF under each device category. A device is considered ON when there is a power supply. This data helps to identify any problem meters.

Click a table link to drill down to the **Device Status Detail** page for a granular view.

Property	Value
Subject Area	MDM - Service Point Fact
Measure	Device Count, % Total

Installation Status

This analysis shows the count of devices based on the installation status (the device life cycle). Filter the devices per category for specific details.

Click a table link to drill down to the **Device Status Detail** page for a granular view.

Property	Value
Subject Area	MDM - Service Point Fact
Measure	Device Count, % Total

Installation Trend

The Installation Trend dashboard page gives a bird's eye view of the device installations and removals.

Installation History

This analysis shows the count of devices that are installed in the last 15 months. Click **View By** to choose to slice the details by head end system, device type, device category, manufacturer, model, or geographical code.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	Installed Devices

Installs and Removals

This analysis shows the total number of devices which are installed and/or removed each month, in the last 15 months. Click the table link to drill down to daily values for the selected month.

Property	Value
Subject Area	MDM - Installation Event Fact
Measure	Installed Devices, Removed Devices

Devices without Measurements

Devices, after installation, are expected to send measurement readings. This dashboard page has details about those devices which either stopped sending measurements or never recorded any.

Devices Stopped Receiving Measurements

This analysis shows a summary of the devices that were sending measurements and then stopped for some reason. The data is broken into aging buckets. Click **View By** to choose to slice the details by service point type, head end system, service provider, device type, manufacturer, and model.

Click a table link to drill down to the **Devices without Measurements Detail** page for a detailed view.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	Device Count, % of Total

Devices Never Received Measurements

This analysis shows a summary of the new devices that never sent any measurements since the time of installation. It helps to identify cases like faulty installation, manufacturing defects, etc. Click **View By** to choose to slice the details by service point type, head end system, service provider, device type, manufacturer, and model.

Click a table link to drill down to the **Devices Never Received Measurements Detail** page for a detailed view.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	Device Count, % of Total

Devices Never Received Measurements Detail

This analysis shows the details of the devices which never received measurements.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	<no measures>

Devices without Measurements Detail

This dashboard page shows the details of the device selected in the respective dashboard page.

Devices Stopped Receiving Measurements Detail

This analysis shows the devices that stopped sending measurements due to some reason. The table shows the service point and device details, along with number of days the device has not been recording measurements .

Click a table link to drill back to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected device.

Property	Value
Subject Area	MDM - Service Point Snapshot Fact
Measure	Days without Measurement

Performance

The Performance dashboard provides key performance indicators (KPIs) for the Oracle Utilities Meter Data Management performance.

Click **Dashboards**, expand **Meter Data Analytics**, and then click **Performance** to access the dashboard.

Performance provides the following dashboard pages:

- **Overview**
- **Quality**
- **Quality Analysis**
- **Timeliness**
- **On-Time Analysis**
- **Estimation**

Overview

The Overview dashboard page provides a snapshot view of the Oracle Utilities Meter Data Management data.

Percent of Normal Intervals

The gauge shows the percent of normal intervals that have been received. Click the gauge to drill down to the **Quality** dashboard page for the same time period.

The table shows the count of normal intervals and also the total count of intervals.

Property	Value
Subject Area	MDM - Quality Count Fact
Measure	Normal Interval %

Percent of On-Time Intervals

The gauge shows the percent of on-time intervals that have been received. Click the gauge to drill down to the **Timeliness** dashboard page for the same time period.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	On-Time Intervals %

Percent of Normal Intervals by Segment

This analysis shows a breakdown of normal intervals returned by the selected segment. Click **View By** to choose to slice down the details by head end system, device type, manufacturer, market, service provider, usage calculation group, city, or postal code.

Click the table link to drill down to the **Quality** dashboard page for a detailed view.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	Normal Interval %

Percent On-Time Intervals by Segment

This analysis shows a breakdown of on-time intervals returned by the selected segment. Click **View By** to choose to slice down the details by head end system, device type, manufacturer, market, service provider, usage calculation group, city, or postal code.

Click the table link to drill down to the **Timeliness** dashboard page for a detailed view.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	On-Time Intervals %

Quality

The Quality dashboard page provides the measures of quality of meter data.

Quality Distribution

The pie chart displays the count of normal measurements as a percentage of total measurements, segmented by quality category.

Property	Value
Subject Area	MDM - Quality Count Fact
Measure	% of Total

Non-Normal Intervals

The graph shows the count of non-normal interval data per month segmented by quality category. Click the table link to view daily values.

Property	Value
Subject Area	MDM - Quality Count Fact
Measure	% of Total

Quality Analysis

The Quality Analysis dashboard page displays the count of various quality measures. Click **View By** to choose to slice the details by head end system, manufacturer, geo code, city, device type, market, service provider, usage calculation group, or postal code. You can select a combination of three segments.

Property	Value
Subject Area	MDM - Quality Count Fact
Measure	Count, % of Total

Timeliness

The Timeliness dashboard page provides an overview of the AMI timeliness data.

AMI Interval Timeliness Distribution

This analysis shows the timeliness distribution of AMI intervals.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	Timeliness Count

Late AMI Intervals

This analysis shows the monthly trend of late AMI intervals over time. Click the graph to view the daily details.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	Late Count, Late Quantity

On-Time Analysis

The On-Time Analysis dashboard page provides a breakdown of timeliness data.

AMI Interval Timeliness Analysis

This analysis shows a summary of timeliness for the selected slice by attributes. Click **View By** to choose to slice the details by head end system, manufacturer, geo code, city, device type, market, service provider, usage calculation group, or postal code.

Property	Value
Subject Area	MDM - Timeliness Overview Fact
Measure	Timeliness Count, Timeliness Quantity

Estimation

The Estimation Summary analysis shows the distribution of estimated and user-edited measurement quantity per estimated and user-edited measurement count per month.

Property	Value
Subject Area	MDM - Quality Overview Fact
Measure	Estimated Quantity, User Edited Quantity, Estimated Count, User Edited Count

Usage Details

The Usage Details dashboard provides key performance indicators (KPIs) for the Oracle Utilities Meter Data Management usage. Click **Dashboards**, expand **Meter Data Analytics**, and then click **Usage Details** to access the dashboard.

Usage Details provides the following dashboard pages:

- **Overview**
- **Usage Trend**
- **Degree Days**
- **Usage by Day**
- **Usage by Hour**
- **Usage Comparison**

Overview

The Overview dashboard page displays the usage distribution and usage summary details based on the criteria you select.

Usage Distribution

This analysis shows the measured usage quantity distribution per category. Click **View By** to choose to slice the data by usage calculation group, city, device type, geo code, head end system, manufacturer, market, model, postal code, service provider, or service type.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Measured Quantity

Usage Summary

This analysis summarizes the measured usage quantities over 15 months. The graph also shows a monthly average by year. Click the table link to drill down to the **Usage by Day** dashboard page for daily details in that month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Total Quantity

Usage Trend

The Usage Trend dashboard page shows the trends across normal usage, estimated usage, and time of use (TOU) mapped usage.

Usage Trend

This analysis shows the usage quanities trending over a period 15 months. The table shows the normal, estimated, and user-edited usage quantities over 15 months.

The table shows the normal, estimated, and user-edited measurement quantities over 15 months. Click the table link to drill down to the **Usage by Day** dashboard page for specific usage details in that month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Normal Quantity, MC Count

Estimated Usage Trend

This analysis tabulates the estimated measurement quantities over 15 months. Click the table link to drill down to the **Usage by Day** dashboard page for specific usage details in that month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Usage Quantity

TOU-Mapped Usage

This analysis tabulates the TOU-mapped measurement quantities over 15 months. Click the **TOU Map** drop down to filter the data for a particular interval. Click the graph bars to drill down to the **Usage by Day** dashboard page for specific usage details in that month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Estimated Quantity (% estimated as mouse over)

Degree Days

The Degree Days dashboard page provides details about the heating and cooling degree days against a rolling period of months.

Degree Days

This analysis shows the actual usage/load and heating/cooling degree days, for 15 months. Click the table link to drill down to the details page displaying daily values in that month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Heating and cooling degree days, Usage

Average Measuring Component Usage

This analysis shows the average usage/load per measuring component for the last 15 months. It also shows the corresponding heating/cooling degree days. Click the table link to drill down to the details page displaying daily values in that month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Heating and cooling degree days, Usage

Usage by Day

The Usage by Day dashboard page provides the daily usage details.

Usage by Day

This analysis displays usage values for a month on a daily basis. The graph also shows the measuring component count. Click the table link to drill down to the **Usage by Hour** dashboard page for hourly details.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Quantity, Measuring Component Count

Three-Month Usage Trend

This analysis helps in comparing the usage data trend over a three-month period.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Quantity

Usage by Hour

The Usage by Hour dashboard page provides the hourly usage details.

Usage by Hour

This analysis displays daily usage values on an hourly basis.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Quantity, Average usage for day

Three-Day Usage Trend

This analysis helps in comparing the usage data trend over a three-day period.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Quantity

Usage Comparison

The Usage Comparison analysis compares the usage data for two selected dimensions during the selected calendar month.

Property	Value
Subject Area	MDM - Measured Quantity Fact
Measure	Average Measured Usage per MC for Dimensional Value 1, Average Measured Usage per MC for Dimensional Value 2

Usage Summary

The Usage Summary dashboard provides key performance indicators (KPIs) related energy usage. Click **Dashboards**, expand **Meter Data Analytics**, and then click **Usage Summary** to access the dashboard.

Usage Summary provides the following dashboard pages:

- **Overview**
- **Usage Views**
- **Usage Analysis**
- **Top N Analysis**
- **Unreported Usage Details**

Overview

The Overview dashboard page provides a summary about usage and unreported usage.

Usage Summary

This analysis shows a month-on-month usage summary for the select usage snapshot type. The graph displays consumption quantity based on the TOU period.

Property	Value
Subject Area	MDM - Consumption Fact
Measure	Quantity

Unreported Usage

A usage is unreported when there is consumption but it was never processed and sent for billing. This analysis shows a summary of unreported usage per age buckets.

Click **View By** to choose to slice the details by usage subscription type, usage group, or customer class. The table shows the count of service points and percent of usage for each segment.

Property	Value
Subject Area	MDM - SP Usage Transaction Fact
Measure	Service Point Count, Usage Quantity

Usage Views

This dashboard page gives an overview of the normal and non-normal usage quantities based on various attributes.

Usage Summary by TOU Period

This analysis shows a 15-month usage trend by TOU period.

Property	Value
Subject Area	MDM - Consumption Fact
Measure	Usage Quantity

Non-Normal Usage Summary by Condition Code

This analysis shows a 15-month non-normal usage trend sliced by condition code. Non-normal usage classification is as done by the Oracle Utilities Meter Data Management system based on the Measurement Condition Category attribute.

Property	Value
Subject Area	MDM - Consumption Fact
Measure	Quantity

Usage Analysis

This analysis allows to view the usage associated with a combination of dimensions. Users can vary the combination of dimensions and thus understand the usage variations. The analysis also shows a summary of usage for the selected attributes.

Click **View By** to choose to slice the details by service point type, market, usage subscription type, city, geographical code, postal code, service provider, or usage group.

Property	Value
Subject Area	MDM - Consumption Fact
Measure	Usage Quantity

Top N Analysis

This dashboard provides a snapshot of the top extreme scenarios - the highest and lowest usage details.

Top N Analysis - Highest Usage

This analysis has three views which lists the records with the highest usage consumption.

The tabular view the top 100 records with highest consumption for the selected month. This table has the drill back capability on the **Service Point** column to the Oracle Utilities Meter Data Management 360 Degree View portal.

The bar graph shows the top 10 records with the highest usage quantity. The pie chart shows the distribution in two slices – one slice shows the usage consumption for top 100 service points and the other slice shows the quantity for non-top 100 service points.

Property	Value
Subject Area	MDM - Consumption Fact
Measure	Quantity

Top N Analysis - Lowest Usage

This analysis shows a list of service points with lowest consumption for the selected month. Click the table link to drill back to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected service point.

Property	Value
Subject Area	MDM - Consumption Fact
Measure	Quantity

Unreported Usage Details

This dashboard lists the top 100 records with the highest unreported usage quantity. The table displays the service point and customer details with the option to drill back to the Oracle Utilities Meter Data Management 360 Degree View portal for a service point.

Click the **Account** column link to drill back to the Oracle Utilities Customer Care and Billing Account portal for the selected account.

Property	Value
Subject Area	MDM - SP Usage Transaction Fact
Measure	Usage Quantity

VEE Exceptions

The VEE Exceptions dashboard includes analyses which provide information about various exceptions related to VEE failures. Examples of these exceptions include high/low errors and spike failures. This information is used to identify patterns acrcoss regions, device types, and monthly trends.

Click **Dashboards**, expand **Meter Data Analytics**, and then click **VEE Exceptions** to access the dashboard.

VEE Exceptions provides the following dashboard pages:

- **Overview**
- **Exception Trend**
- **Exception Analysis**
- **Exception Analysis Detail**

Overview

The Overview dashboard page displays the VEE exception distribution across cities. It helps in identifying which region has the most usage exceptions.

Exceptions

This analysis provides a spatial representation of the VEE exception distribution for the selected city.

Click the color-coded region on the map to view the VEE exception count in that region, along with the city and state details. Click the **City, State** link to broadcast the City, State value to the **Exception Types** and **Exceptions by Month** analyses on the same page.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Count of Exceptions

Exception Types

This analysis shows the exception distribution based on the exception type for the selected city. The data is based on the region selected on the map.

Click the **View By** drop down to slice the data by exception type, device type, head end system, service provider, manufacturer, or model. Alternatively, use the **City,State** drop down to select the region for which you want to view the exception details.

Click the pie chart to drill down to the **Exception Trend** or **Exception Analysis** dashboard pages for specific details.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Percentage of exceptions sliced by the chosen category

Exceptions by Month

This analysis shows the count of VEE exceptions in a region per month as a 15-month trend. The yearly average for exceptions is also shown. Any deviation in the trend (on the upper/lower side) is an indication to investigate the reason for the trend deviation.

The data is based on the region selected on the map. Alternatively, click the **City,State** drop down to select the region for which you want to view the exception details. Click the graph to drill down to the **Exception Trend** or **Exception Analysis** dashboard pages for specific details.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Count of Exceptions (Bar), Yearly Average (Line)

Exception Trend

The Exception Trend dashboard page gives an overview of how exceptions are trending. The page shows the trend for initial measurements with exceptions over 15 months.

Initial Measurements with Exceptions

This analysis displays two graphs - one showing the count of initial measurements with exceptions for the current month and 14 previous months, and the other showing the count of initial measurements per month per category. The table shows statistics on VEE exceptions for over 15 months, the percentage, and the count of measurements with exceptions. Click the table link to drill down to the **Exception Analysis** dashboard page.

Click **View By** to choose to slice the details by device type, head end system, service provider, manufacturer and model.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Initial Measurements with Exceptions, Initial Measurement Count, % Initial Measurements with Exceptions

Exceptions by Severity

This analysis shows the count of VEE exceptions by severity. The table shows the exception severity trend for the selected month and 14 previous months. Any deviation in the trend (on the upper/lower side) is an indication to investigate the reason for the deviation.

Click the **Exception Category**, **Exception Type**, or **Exception Severity** drop down to filter the data by the respective selection. Click the table link to drill down to the **Exception Analysis** dashboard page for specific exception details.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Count of exceptions, Trend compared to previous month

Exception Analysis

This dashboard page gives an insight into the rules being violated the most and a summary of the exceptions based on attributes.

Exceptions Analysis Summary

This analysis shows a summary of exceptions for the selected slice by attributes. Click **View By** to choose to slice the details by head end system, device type, service provider, manufacturer, model, customer class, exception type, exception category, exception severity, postal code, or city.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Exceptions Count, % of Total

VEE Rules with Most Exceptions

This analysis displays the VEE rules with highest VEE exceptions in a month. The table shows VEE rules, their respective VEE groups, and the number of exceptions per each rule. The analysis helps taking corrective measures in rule areas with more number of exceptions.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Exceptions

Exception Comparison

This analysis shows a comparison of the exception count between the selected dimensional values based on the selected comparison dimension.

Click the **Comparison Dimension** drop down to compare the data by head end system, device type, service provider, manufacturer, model, or city. Click the table link to drill down to the **Exception Analysis Detail** page for exception specific details.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Count of Exceptions, % of Total

Exception Analysis Detail

The table displays the top 100 records based on the exception count. Click a column link to drill back to the Oracle Utilities Meter Data Management 360 Degree View portal for the selected service point or device.

Property	Value
Subject Area	MDM - VEE Exception Fact
Measure	Exceptions Count

Additional Information

The Licensing and Packaging Guide contains valuable information on the features and data structures available in Oracle Utilities Meter Data Management Business Intelligence. The guide is provided as an Excel spreadsheet, Oracle Utilities Advanced Spatial and Operational Analytics V2.4.0.2 Licensing and Packaging Guide.xls. Content includes:

- A list of all of the available Oracle Utilities Business Intelligence products.
- Installer Options - the required extractors and schemas for each product.
- Subject Areas, Facts, and Dimensions.
- Dashboards and Answers - the standard dashboards available and the associated Answers along with the Answer path.