

Oracle Utilities Network Management Business Intelligence

Metric Reference Guide

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Preface

This guide describes how to perform basic tasks using Oracle Utilities Network Management Business Intelligence. It also identifies and describes content components such as dashboards, answers, and subject areas.

Audience

This guide is intended for all users of Oracle Utilities Network 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 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 Customer Care and Billing Documentation Library

Typographical Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	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.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1

Dashboard Content Reference

Oracle Utilities Network Management Business Intelligence provides the following analytics dashboards:

- **Distribution Analytics**
- **Outage Analytics**

Distribution Analytics

The Distribution Analytics' standard set of dashboards provide Distribution Management System key performance indicators (KPIs). Click **Dashboards**, expand **Distribution Analytics**, and then click **Distribution** to access these dashboards.

Dashboards

Distribution Analytics provides the following dashboards:

- **Feeder Load (Composite)**
- **Feeder Performance**

Feeder Load (Composite)

- **Feeder Load:** The graph shows the average feeder load on a monthly basis.
- **Feeder Load Detail:** Maximum Daily Feeder loads for the previous week helps monitor and observe peaks in the loads. Change the date range filter to select the feeder loads for any desired period.
- **Greatest Feeder Peak Load Detail:** Feeders that experienced maximum peak loads show where the heaviest loads exist within the distribution network. These feeders may need monitoring to ensure overload conditions do not occur.
- **Smallest Feeder Capacity Margin:** Breaker capacity for each feeder helps determine which feeders have the smallest remaining margin before overloads may occur, possibly resulting in a breaker lock-out.

Feeder Performance

The Feeder Performance dashboard provides overall health of the feeders, such as worst performing feeders. This can alert the businesses to take action in advance.

- **Feeder Performance:** Displays reliability indices for company, region, branch, substation, and feeder level along with number of customers served per control zone.

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- **Worst Performing Feeders:** Displays feeders sorted by their SAIDI numbers. Worst performing feeders are shown at the top of the table. This also shows how each feeder contributes to total SAIDI value and the rank of each feeder.
 - **Consecutive Worst Performing Feeders:** Displays feeders that are consecutively performing badly to help identify feeder issues. Previous month's SAIDI is also displayed to compare current and previous period's performance. This shows whether feeder performance is better or worse than last period.

Outage Analytics

The Outage Analytics' standard set of dashboards provide Outage Management System key performance indicators (KPIs). Click **Dashboards**, expand **Outage Analytics**, and then click **Outage** to access these dashboards.

Dashboards

Outage Analytics provides the following dashboards:

- **Overview**
- **Outages Playback**
- **Crew**
- **Customer**
- **Events**
- **Wire Down**
- **Reliability**
- **History**
- **Feeder Performance**

Overview

The Overview dashboard provides a high level overview of the near real time information about outages. The near real time period can be configured. The available period is displayed on top of the page.

- **Outages:** A view of current outages based on the near real time data extracted from OUBI schema. The Outages view includes the following features:
 - Outage locations are represented by green, yellow and red dots on the map. The severity of these outages is based on number of customers impacted. By clicking on any outage location, more information about the outage is displayed in an information window.
 - Crews that are working on the outages are represented by yellow working hats.
 - Postal codes are color coded based on the number of customers that are impacted by those outages.
 - A heat map shows where the intensity of an issue is highest, as in the longest outage durations.
 - Third-party weather radar services can be used for weather conditions.
- **Outage Summary:** A summary of total number of outage events, total number of customers interrupted, average outage duration and so on.
- **Outage Causes:** A summary of all the outages based on type of causes. This helps to plan current outage restorations to avoid outages in the future. The dashboard can be filtered by clicking on any of the causes.

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- **Restoration Status:** An hourly summary of the number of customers interrupted and the number of customers that are restored along with total number of calls received every hour. This shows the rate at which the customers are being restored.
 - **ERT:** Graph that shows Estimated Restore Times for customers.
 - **Restored Customers:** A pie chart shows the percentage of customers that are still out when compared to total number of customers that were affected by all outage events.
 - **Critical Customers:** A list of all critical customers that are affected by current outages. Also displays their account information and criticality type. Click on the account ID to view further details about that critical customer.
 - **Unresolved Customer Calls:** A graph of all the customer calls by call type. This provides a view of how quickly calls are resolved by showing call status types.

Outages Playback

The Outages Playback map replays all outage events that are within near real time range. The playback is based on hourly summary of all outage events. This is typically used to analyze how quickly outages are restored during a storm. Click on the map for specific details about outage events in that region.

Crew

- **Crew Assignment Summary:** A list of all crew assignments for current outages. The list includes information such as Crew ID, Crew Type, and number of assignments for every crew. This provides a view of how well the resources are managed.
- **Onsite Crew List:** A list of all the crews along with assignment time, accept time, and arrival time. These crews represent all the resources that are actively working on restoring outages.
- **Recent Crew Summary:** A view of how quickly crews are allocated and responding to outages. It includes average assign, dispatch, onsite, and en route durations.

Customer

- **Customer Detail:** A list of all customers that are currently experiencing outages. They are grouped by events, which is helpful in analyzing how many customers are out due to each event. Current outages are plotted on a map. Click on event number on the table to filter the map by that event number.

Events

- **Daily Summary:** A histogram that shows daily summary of number of customers impacted, number of customer minutes interrupted, and a cumulative number of associated events.
- **Event Summary:** An hourly summary of number of events and associated calls and customers.

Wire Down

Near Real Time events associated with all wire downs are displayed in this dashboard.

- **Wire Down Overview:** An overview of the all events, customers interrupted, and total number of calls related to those events is shown. Click Company to drill down to view region, substation and feeder specific information.
- **Active Wire Down Calls:** A list of all wire down calls that are associated with active events only. Event Number and caller information are also displayed to help take immediate action on those calls.
- **Call Summary:** Call summary by hour helps monitor the progress in outage restoration. Decrease in number of calls may indicate the restoration is in progress.

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- **Events with Wire Down Calls:** All events that are associated with active wire downs are plotted on a graph to show the status of events and how they are progressing.

Reliability

Reliability dashboard displays IEEE based indices that represent customer satisfaction, how quickly outages are restored, and so on. Reliability indices include:

- SAIDI – System Average Interruption Duration Index
- SAIFI – System Average Interruption Frequency Index
- CAIDI – Customer Average Interruption Duration Index
- MAIFI – Momentary Average Interruption Frequency Index
- **Reliability by City:** Reliability indices are calculated for each city and are color coded on the map based on the indices. Pick the index of choice from the legend drop down.
- **Reliability by Control Zone:** Reliability indices are calculated for each control zone.

History

The History dashboard provides historical information to show trends that help plan for future actions. Historical data can be filtered by date range, storm name, control zone etc.

- **Monthly Outage Playback:** Similar to replay functionality on “Outages Playback” dashboard, replay on this map can be played using historical data that could span over several years. The data is aggregated by month; however, the aggregation can be configured to accommodate quarterly or yearly data.
- **Yearly Summary:** A histogram of number of events against impacted customers aggregated by year. This shows a trend of whether the number of events are increasing or decreasing over the years.
- **Estimated Vs Actual Restoration Time:** A trend that shows how well the restoration times were estimated in the past. If there is a large difference between the estimated and actual restorations times, businesses may need to change estimation methods.
- **Event Summary:** A summary of all events that happened throughout the years, along with how events impacted customers.
- **Outage Operations:** The pie chart shows the number of events by each outage device type.
- **Outage Causes:** The pie chart shows the number of events by each outage cause per the selected calendar date.

Feeder Performance

The Feeder Performance dashboard provides overall health of the feeders, including worst performing. This can alert the businesses to take action in advance.

- **Feeder Performance:** Displays reliability indices for company, region, branch, substation and feeder level along with number of customers served per control zone.
- **Worst Performing Feeders:** Displays feeders sorted by their SAIDI numbers. Worst performing feeders are shown at the top of the table. This also shows how each feeder contributes to total SAIDI value.
- **Consecutive Worst Performing Feeders:** Displays feeders that are consecutively performing badly to help identify feeder issues. Previous month’s SAIDI is also displayed to compare current and previous period’s performance. This shows whether feeder performance is better or worse than last period.

Additional Information

The Licensing and Packaging Guide contains valuable information on the features and data structures available in Oracle Utilities Network Management Business Intelligence. The guide is provided as an Excel spreadsheet, Oracle Utilities Advanced Spatial and Operational Analytics V2.4.0 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.

