# Oracle Utilities Analytics Cloud Service

User Guide

Release 2.4.6

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E40533-01

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# Chapter 1

# Oracle Utilities Analytics Cloud Service User Interface

The section below provides an overview of the Oracle Utilities Analytics Cloud Service (formerly known as DataRaker) User Interface. For a complete listing of the various screens available, please consult the Menu Navigation page.

The Oracle Utilities Analytics Cloud Service User Interface (UI for short) is the web-based portal that allows users to interact with the Oracle Utilities Analytics Cloud Service system. The user interface is accessible from within each client's network, as well as from within the Oracle Utilities Analytics Cloud Service VPN, by pointing any supported browser to the URL http://[company-name].dataraker.net , where [company-name] is the instance name for the client, as described in the Instance Summary page.

The most recent major release of the User Interface was on 4/15/2011. Release Notes are updated accordingly.

This chapter includes:

- **Supported Browsers**
- **Access Restrictions**
- **Login Screen**
- **Main Navigation**

# Supported Browsers

Oracle Utilities Analytics Cloud Service currently supports the following browsers:

- Mozilla Firefox 3
- Internet Explorer 6, 7 and 8
- Google Chrome

Oracle Utilities recommends Firefox 3 as the preferred browser for accessing the user interface. Other browsers (and other versions) can be used to access the Oracle Utilities Analytics Cloud Service system, but performance and formatting are not supported on those browsers and versions.

# Access Restrictions

Given that the Oracle Utilities Analytics Cloud Service application contains sensitive and confidential information, access to the Oracle Utilities Analytics Cloud Service client URL is restricted by IP address. Clients inform Oracle Utilities of the IP address ranges considered valid for their network, and only requests from those IP address will be allowed to load the login screen. Non-recognized IP addresses are not allowed to load the login screen. Users wishing to access the Oracle Utilities Analytics Cloud Service system off-site must VPN into their utility network to access the Oracle Utilities Analytics Cloud Service system.

# Login Screen

Authorized users that point their browsers to the Oracle Utilities Analytics Cloud Service URL will access the login screen, as shown below, which requires them to enter a username and password. Company name will be auto-filled for clients.


First time users should contact Oracle Utilities to obtain an initial password, by sending an email to [company-name].support@dataraker.com, where [company-name] is the instance name for the client, as described in the Instance Summary page.

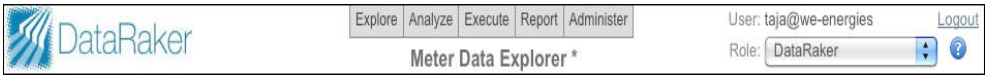
The user name and password combination authenticates the user with the Oracle Utilities Analytics Cloud Service system. The User Interface then controls what data and functions the can access, based on the role and the specific configuration for that user, as defined in the User Management page.

Users accessing the system from within the Oracle Utilities Analytics Cloud Service VPN will also need to supply the company field to access the proper data set. Company names are also described in the Instance Summary page.

After 10 failed attempts to log into the UI the user will not be able to try again for an hour.

# Main Navigation

Each user is assigned a default start page, and upon login, that default page will be displayed. Regardless of the default page being loaded, the same header will be displayed for all users on the top of the screen, as illustrated and explained below:




## Menu

At the center top of the header is the navigation menu, the content of which is described by clicking through the links below. The first level of navigation typically consists of the main headers listed below. The Navigation Menu page provides a complete description of the navigation menu.

- **Explore** - This menu option is where the majority of the screens that allow access to data reside.
- **Analyze** - This is where specialized screens that allow users to view analytic results are a located.
- **Lists** - This menu option is where high-level summaries and details about Oracle Utilities Analytics Cloud Service Tests are available.
- **Execute** - This portion of the menu is currently exclusive to Oracle Utilities Analytics Cloud Service users. It allows the management and control of Jobs, Runs, and Calcs.

- **Administer** - This section of the menu allows users to administer Users, Roles, and the System. Most of the screens here are also reserved for Oracle Utilities Analytics Cloud Service users.

Note that depending on your permissions, you may not have access to many of the levels of the menu.

## Role

On the upper right of the screen, as shown in the screenshot above, the role under which the user is operating is displayed. Most users will only have one role, and will not have the option to switch roles. Users with more than one role will be able to switch roles using the drop-down menu. The Role page provides more information on roles and their definition.

# Chapter 2

# Menu Navigation

This page provides an overview of the main User Interface Menu Navigation.

| Level 1 | Level 2 | Level 3 | Screen Name | Description |
|---|---|---|---|---|
| **Explore** | | | *Meter Data Explorer* | Main Data Access Screen for Meter-Level Data |
| | | | *Premise Data Explorer* | Main Data Access Screen for Premise-Level Data |
| | | | *Account Usage Summary* | Summary Screen containing premise and meter level data, by account |
| | Relations | | *Map* | Geographic footprint of selected meters by device on map |
| | | | *Meter Relation Explorer* | Inventory of Meter relations, including their options and counts per option |
| | | | *Premise Relation Explorer* | Inventory of Meter relations, including their options and counts per option |
| | Lists | | *List Map* | Shows all meters from a list on a map |
| | | | *List Activity* | Simple access to meter level reads, for only a list of meters |
| **Analyze** | Devices & Outages | | *Device Aggregation* | Aggregate consumption data for all meters within the selected hierarchy |
| | | | *Meter Outage* | Summary of meter outages in the system |
| | | | *Circuit Outage* | Overview of all Circuits in the system, along with indications of their relative performance |
| | Segments | | *Segment Aggregate Distribution* | Shows average + aggregate usage for a particular aggregation scenario |

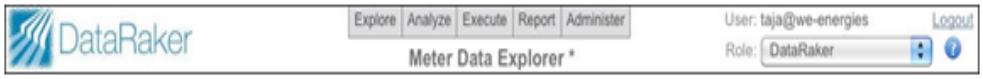
| Level 1 | Level 2 | Level 3 | Screen Name | Description |
|---|---|---|---|---|
| | | | *Segment Distribution* | Shows distribution for a particular aggregation scenario |
| | Contract Compliance | | *Various* | Custom Reports. See Contract Compliance Section for each client |
| **List** | Reports | | *Report Summary* | Access to meter data, for only a list of meters |
| | | | *List Daily Usage* | Daily consumption or usage value for each meter for each day it is on the list |
| | | | *List Daily Metric* | Same as above but allows you to choose the metric desired |
| | | | *List Aggregate Daily Usage* | Summary of the consumption of all meters on a given test on a single day |
| | | | *List Assessor Detail* | Summary view of assessor data for each meter listed |
| **Execute** | Jobs | Run | *Management* | Allows users to create or edit runs |
| | | | *Run Log* | Allows users to view the logs of runs |
| | | Interface | *Management* | Allows users to create or edit import and export interfaces |
| | | | *Interface Log* | Allows users to view the logs of interfaces |
| | | | *List* | Allows users to view a list of all transactions |
| | | | *Transaction Log* | Allows users to view the log of all transactions |
| | | Scenario | *Management* | Allows users to manage aggregation scenarios |
| | | Analytic Calc | *Management* | Allows users to create analytic calculations |
| | | | *Run log* | Allows users to view the logs or analytic calc runs |
| | | | *Run Results* | Allows users to view the results of analytic calcs |
| | Data Audit | | *List Audit* | Summary of Lists (point group) on selected day |
| | | | *Relation Audit* | Summary of Relations on selected day |
| | | | *Attribute Audit* | Summary of Attributes on selected day |
| | | | *List Upload* | (Currently Open to DataRaker users only). Allows upload of discrete lists of meters |

| Level 1 | Level 2 | Level 3 | Screen Name | Description |
|---|---|---|---|---|
| **Administer** | User | | *Management* | Allows users to administer their user profile. For DataRaker role, allows the administration of all users. |
| | | | *Log* | Shows activity log for all users |
| | Role | | *Management* | Allows the configuration of roles |
| | | | *Lookups* | Allows the configuration of roles by client |
| | System | | Administration | Cache Management |
| | | | *Lookups* | Allows the configuration of the System by client |
| | | | *List Management* | Manage Tests including creating new tests and modifying existing tests. |

# Chapter 3

# Roles

Oracle Utilities Analytics Cloud Service uses a role-based user environment, with each role mapped to a specific department or function. In the User Interface, the role under which the user is currently operating is displayed in the upper right of the screen, as illustrated below.




Most users will only have one role, and will see the name of their role instead of a drop down. Users with more than one role can select a different role using the drop-down list, as illustrated below. Users can only be logged into one role at a time. The Role displayed on the screen remains static until the page is refreshed, upon which the updated role the user is logged into, if this has changed, will display.


## Possible Roles

Below is a list of the various roles currently defined in the Oracle Utilities Analytics Cloud Service system, as well as an indication of the availability of the role to clients.

| Role | Availability |
|---|---|
| Billing | Client |
| Call Center | Client |
| DataRaker/DataRaker Dev | Oracle Utilities-only |
| Energy Efficiency | Client |
| Forecasting | Client |
| Internal Audit | Client |

| Role | Availability |
|---|---|
| Meter Operations | Client |
| Revenue Protection | Client |
| User Administration | Authorized Users Only |

## The Function of Roles

Roles are designed to group like-users together, so that the same navigation and level of access can be applied uniformly to the group, rather than configuring each user individually. The role determines high-level navigation and access, which can then be customized for each individual user.

### How Roles Affect Access in the User Interface

It is important to note that in the User Interface, the role controls many specific elements, as listed below:

- **Menu Navigation** is role-specific. The navigation menu and pages available under the menu are also role-specific.
- **Meter Status and Meter Comments** are role-specific. When you tag a meter or enter a comment on a meter, that information is stored by role. The status options themselves, in fact, are role-specific.
- **Lists** are role-specific. You can only view lists that are assigned to the role under which you are operating.
- **Calcs** are also role-specific. Calcs are designed to operate using the role-based permissions.

# Chapter 4

# Meter Data Explorer

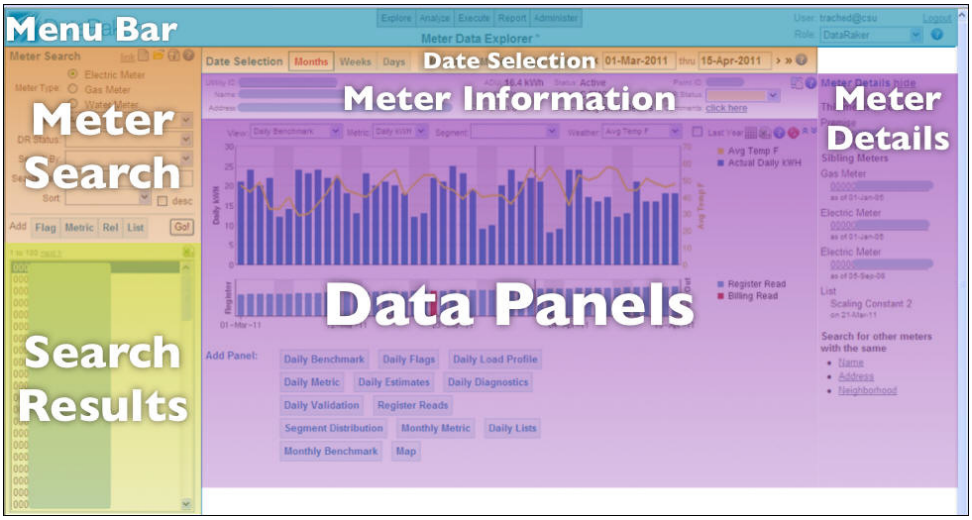
The Meter Data Explorer Screen is accessible from the Oracle Utilities Analytics Cloud Service User Interface menu. This is the primary screen for users to access meter data, view the results of lists, and perform powerful ad-hoc queries on the Oracle Utilities Analytics Cloud Service system.

Most users will default to this page upon logging in. If you have navigated away from this page and would like to return, go to the menu in the center of the page header and click Explore > Meter Data Explorer.

This screen can be customized on a per-client basis.

## Screen Layout

The Meter Data Explorer is organized into distinct areas as illustrated and explained below:



# Basic Meter Search

## Data Explorer Search


Search is the heart of the Data Explorer screen. With it, you can find a particular meter, or a set of meters that meet very simple or very complex criteria.

### Meter Type


If your utility manages multiple commodities (electricity, water, and/or gas), you will be able to select the meter type here. Choosing a different meter type will result in a page reload, as many of the options are specific to the type of meter you are looking for.

### Status


Here, you can select the status of the meter(s) you are looking for.

### Role Status


The Role Status is a special customizable status field that is specific to the Role that you are in.

### Text Search

The two controls labeled 'Search By' and 'Search Text' work together to allow you to search many of the fields in our database, such as account name, address, account number, zip code, etc.

To use the text search, first choose a field to search on in the 'Search By' dropdown. Then, enter some text in the 'Search Text' field. The Oracle Utilities Analytics Cloud Service system will then look for all meters whose fields start with that text, so searching for "abc" will match "abc", "abcde", and "abcdefgh", but "not xyzabc".

You can construct more advanced searches by using the % wildcard. Searching for "123%EM" will match text that start with "123" and then contains "EM" afterwards, like "1234-EM-4567".

## Sort


Use the Sort dropdown to control the order in which your search results are shown. The results are sorted in ascending order (1,2,3) by default, but checking the 'desc' checkbox will result in them being sorted in descending order (3,2,1).

## Saving Filters (Search)


Filters are commodity specific and can be saved privately or shared with colleagues using the icons at the top of the search box.

### Reset Filter


Clear the current filter. Any changes you made will be lost. This action cannot be undone. Be sure to save the filter if you wish to access it later.

### Load Filter


Load a saved filter. In the Load Filter screen: select Private to see filters that you saved, or select the role to see filters which are shared with colleagues in your current role.

### Save Filter


Save current filter. The filter can be saved as either private or shared with your role. A filter saved as private will only be available to you. You can share your filter with colleagues by selecting the role from the drop down menu. Anyone who uses the role will be able to use the filter.

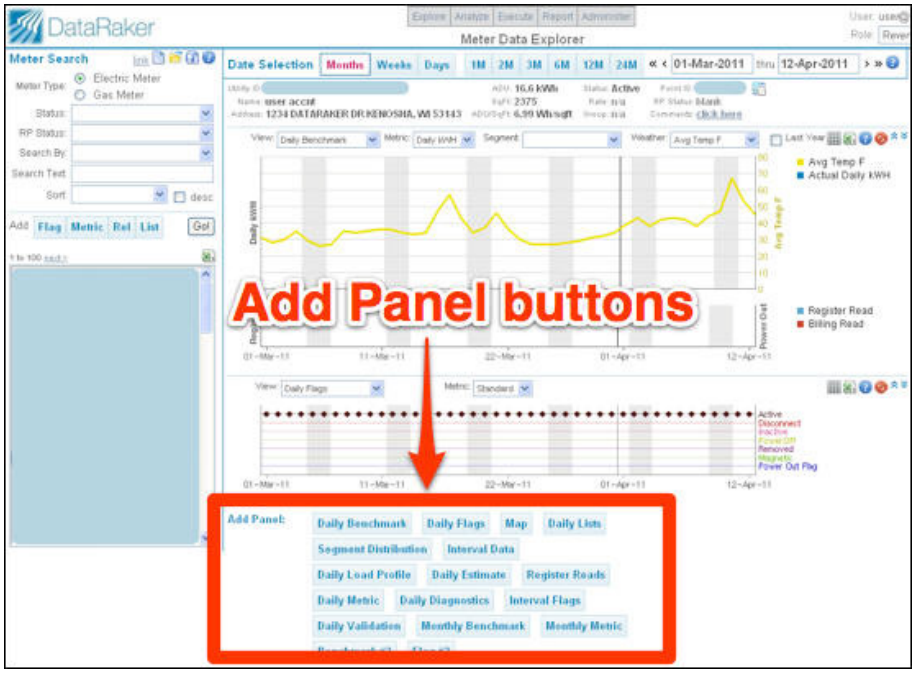
# Panels

The Data Panels (or just "panels") are where all of the action happens on this screen. Each panel shows you different information about the meter or premise you have selected, over the time period selected in the Date Selector. Additional information about each panel is available in the following section.

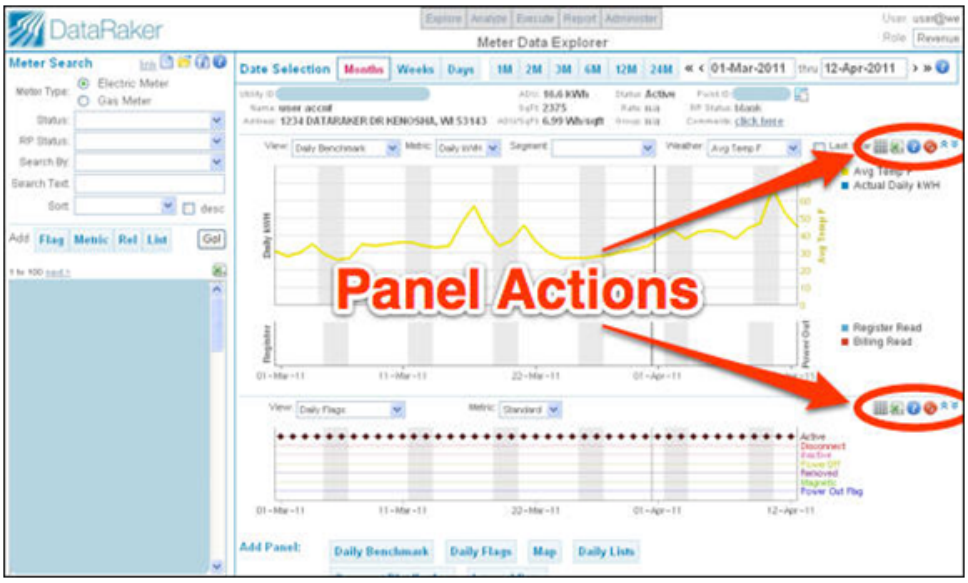
- Daily Meter Benchmark
- Daily Premise Benchmark
- Daily Flags
- Daily Load Profile
- Daily Metric
- Daily Diagnostics
- Daily Validation
- Register Reads
- Segment Distribution
- Interval Data
- Interval Flags
- Monthly Metric
- Daily Lists
- Monthly Benchmark
- Map Panel

## Changing or Adding Panels

The screen defaults to two panels upon loading, but users can easily change panels by clicking on the 'View' drop-down at the top left of every panel. Users can also add panels by using the add panel buttons below the last panel, as illustrated below.



The "Add Panels" buttons enable you to add another panel into the current view.




The following actions are available at the upper right-hand corner within each of the data panels.

## View Panel Bar

 View the selected chart data in a segmented spreadsheet. Use to toggle back to the chart-view.

## Export Chart Data

 Export the selected chart data into a CSV file for offline viewing in Microsoft Excel.

## Help

 View a help page specific to the panel.

## Remove

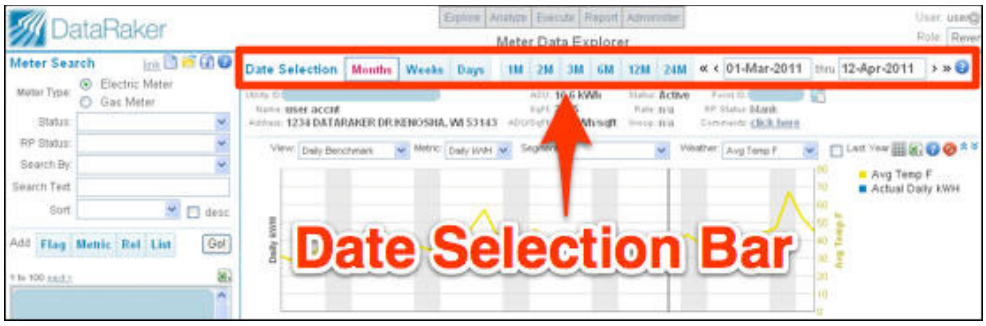
 Remove this panel from the screen.

## Move Up or Down

 Moves the panel up or down in relation to the other panels.

# Date Selection

## Date Selection Bar




The date bar at the top of the screen determines the time period for all of the data shown below. Each of the charts will start and end on the dates shown in the date bar. Here are the components that make up the Date Selection Bar:

### Increment Selector


The increment selector affects how the rest of the date controls operate.

When MONTHS is selected, the Quick Select bar shows 1M 2M 3M 6M 12M 24M, and the single arrows in the Date Selector move the dates by a single month.

When WEEKS is selected, the Quick Select bar shows 1W 2W 3W 4W 5W 6W, and the single arrows in the Date Selector move the dates by a single week.

When DAYS is selected, the Quick Select bar shows 1D 2D 3D 5D 7D 10D, and the single arrows in the Date Selector move the dates by a single day.

### Quick Select Bar

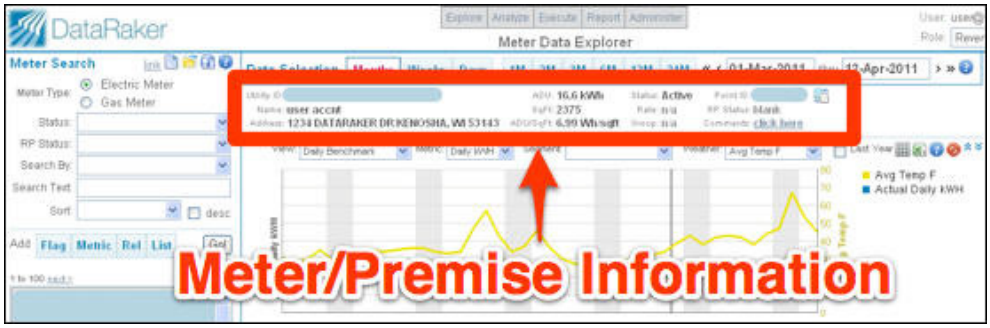

The quick select bar allows you to access the most recent data with a single click. Clicking "2M" will select the most recent two (2) months of data. Likewise, clicking 10D will select the most recent ten (10) days of data. Your choice of increment (months, weeks, or days) determines which of these bars is shown.

### Date Selector


The text boxes are used to select the start time on the left and the end time on the right. The outside double arrows and move the date either forward or backward in the selected increment.

# Standard Point Information

## Point Information

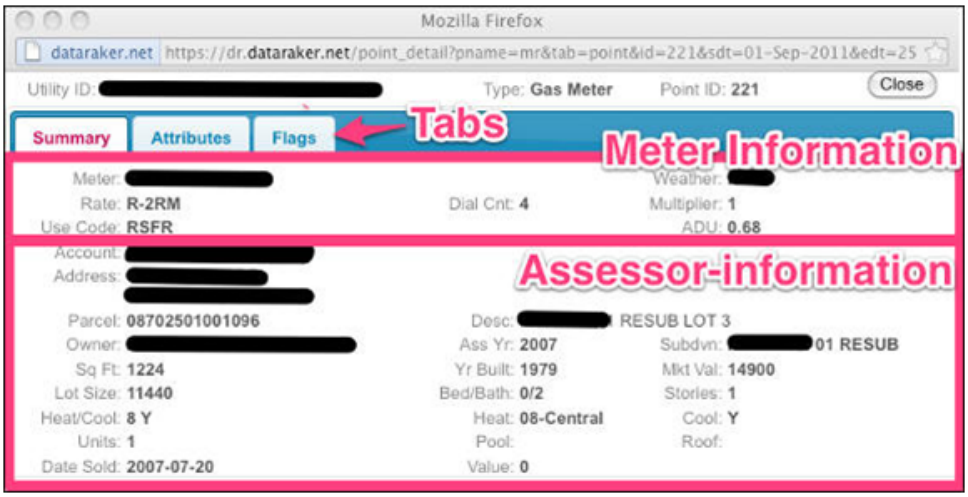



This section of the Data Explorer displays high-level information about the meter or premise, such as the Utility ID, the Name and Address of the account, the area and average daily usage (ADU), and the Rate and Group to which this Meter or Premise belong. The following information is displayed:

- **Utility ID** - The unique ID that Oracle Utilities Analytics Cloud Service uses based on your utility identifiers to refer to the meter.
- **Name & Address** - Based on information from the Utility Client and from normalized Tax-assessor records
- **ADU** - The ADU is the Average Daily Usage for the month of the most recent read. This number ALWAYS reflects the most recent data in our system - it does not change when you change the dates in the Data Explorer.
- **Point Characteristics/Data**
  - SqFt
  - ADU/SqFt
  - Status
  - Rate
  - Group
- **Role Status** - Based on the Role selected, some users have the ability to further "tag" meters or premises for future use. These tags can help identify meters that are under investigation or otherwise merit further discussion. Each option is customizable and varies by client and by role. If you are authorized to use this feature, you will have a yellow drop-down box in this section.
- **Comments** - You can enter comments or view comments that others have left for each meter or premise.
- **Point ID** - This is a system-generated unique identifier. Searches conducted using a point ID will return the fastest results.

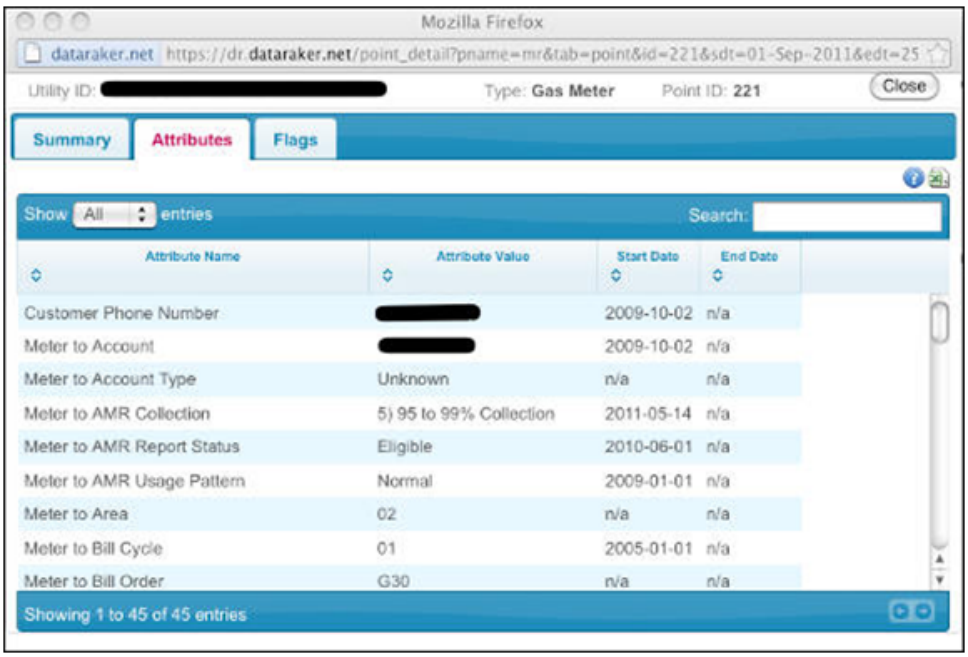
## Utility ID Hyperlink

You may notice that the Utility ID is a hyperlink--additional Point Information can be found in the pop-up window that appears by clicking on the link:




There may be several tabs available in the pop-up window:

- **Summary Tab**- This tab provides:
  - Basic Meter information, including Rate, Use Code, Meter Dial Count, Weather source, Multiplier and ADU (Average Daily Usage--past month)
  - Tax-Assessor information, where available, is below the basic meter information.
- **Attribute Tab** - Basic Meter or Premise information is available in the second tab. These data points are stored as Relations in the Oracle Utilities Analytics Cloud Service system. Data is stored by date, with the most recent relation showing up last.



### Print Data View

 Use the Print Data View feature to export the Oracle Utilities Analytics Cloud Service onscreen graphs and charts to a custom on-screen report that can be saved or printed. Once the report is generated, the subsequent popup screen will give the option to print the report or save the report as a PDF. Note: the Map panel will not be included in the export.

## Meter Details

Users can find additional details about the meter selected on the right hand side of the screen. The meter details section, which can be shown or hidden, contains the following:

### Related-to Links

The first set of links displayed in the meter details show how the meter is related to other items in the system:

- Links to premise(s) associated with the meter, and as-of date of association
- Links to sibling meters (gas, electric, or water, as applicable), and as-of date of association
- Links to account(s) associated with the meter, and as-of date of association
- Links to module(s) associate with the meter, and as of date of association

### List Memberships

The second set of links displayed in the meter details show whether the meter belongs to lists in the system, and the dates of membership. If the meter is not on any list, that information will not be displayed. Note that lists are role-specific, so only the lists for the role in question will be displayed.

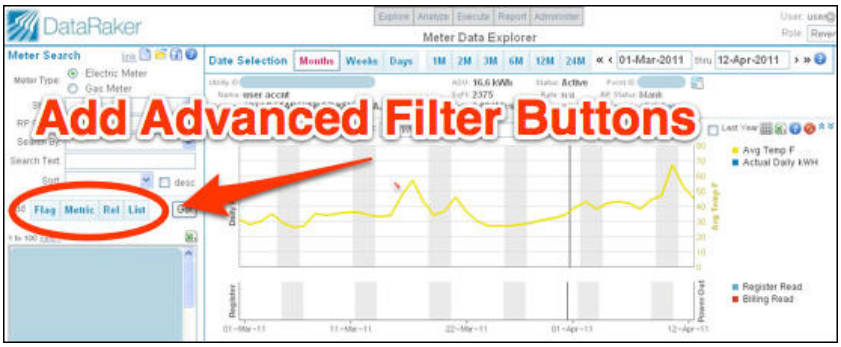
### Search Links

At the bottom of the meter details, users can find some quick links that perform searches in the system to find other meters with the same account name, address, building or neighborhood.

Note that all of the links above will open a new version of the meter data explorer, and will do so in the same tab unless the user specifies they want a new tab by control-clicking or right-clicking on the link.

# Advanced Filter Search

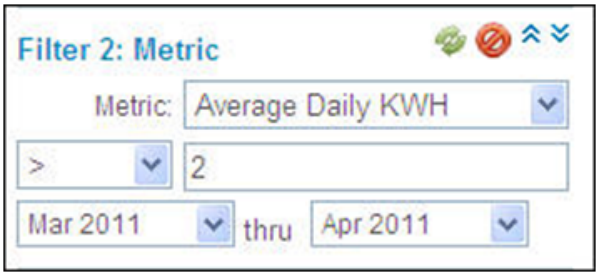
The advanced filters enable you to search all of the data we have in our system in a number of ways. Click on the button corresponding to the advanced filter you want to create, and the filter will appear below the Basic Search area.




## Advanced Filter: Flag


Flags are indicators of events. They identify specific patterns that meters or premises exhibit. Flags also alert occurrences of meter or premise-based issues. Some flags are an outcome of Oracle Utilities Analytics Cloud Service observed patterns.

## Advanced Filter: Metric

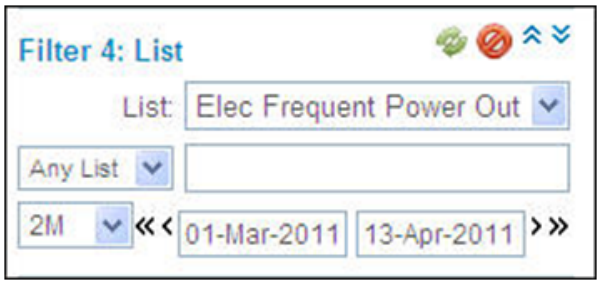



Metrics allow you to filter for meters that have a particular usage, for example, for a particular time period.

## Advanced Filter: Relation


Relations are attributes assigned to a meter or premise at any given instance of time. Examples of relations include Account, Zip Code, Bill Cycle, and Module Type.

## Advanced Filter: List




A specific list contains the results of an analytic calculation or test created in the Oracle Utilities Analytics Cloud Service system. One can find meters or premises that are caught by the test by conducting a search based on the list name and the dates in question. Various operator options allow users to search against test results:

- '**Any**' - This is the default search option that returns any and all results that are found on lists within the date range selected.
- '**New**' - This options allows users to find meters that have both made it onto the results set for the first time ever AND on the "newest qualifying day." Because of the dual requirements, there may be cases that the "newest qualifying day" does not contain meters that are brand new to the list and the results may therefore return 0 meters. NOTE: this option does not re-set seasonally.
- '**Count**' - This option looks for test results that return an exact and specified number of times within the date range selected. NOTE: Many tests, including Zero Consumption tests, return results in many sequential and subsequent days as long as the criteria is met.
- '**Exclude**' - This option looks for results that are NOT on the test selected. This search option should not be used as the first search criterion since the processing resources required would slow down the results significantly.

# Chapter 5

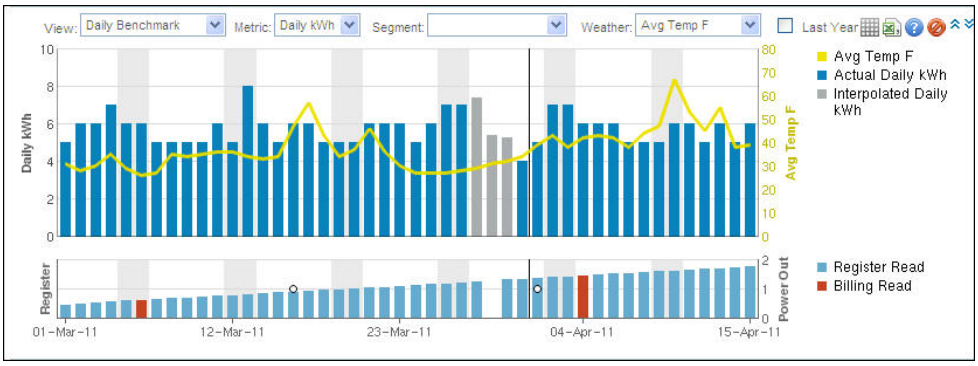
# Data Explorer Panels

This chapter describes the Data Explorer panels provided with Oracle Utilities Analytics Cloud Service. These include:

- **1. Daily Meter Benchmark**
- **2. Daily Premise Benchmark**
- **3. Daily Flags**
- **4. Daily Load Profile**
- **5. Daily Metric**
- **6. Daily Diagnostics**
- **7. Daily Validation**
- **8. Register Reads**
- **9. Segment Distribution**
- **10. Interval Data**
- **11. Interval Flags**
- **12. Monthly Metric**
- **13. Daily Lists**
- **14. Monthly Benchmark**
- **15. Map Panel**

# 1. Daily Meter Benchmark

## Daily Benchmark Panel




The Daily Benchmark panel is currently one of the default panels displayed on the Meter Data Explorer screen. The Daily Benchmark panel is comprised of two charts that, by default, display the derived Daily Consumption and the Register readings as provided by the utility's AMR/AMI system. In addition, each chart contains other derived and received data sources for analysis. Below is a more detailed description of the charts.

## Daily Consumption (Top)

The Daily Consumption chart is populated by default with the Daily Consumption data for the meter commodity. The units displayed are in daily kWH, CCF, or CF for electric, gas, or water meters respectively. Each vertical bar represents a single day's consumption. The color and value tag (visible on mouseover) represent different types of derived consumption values.

### Controls

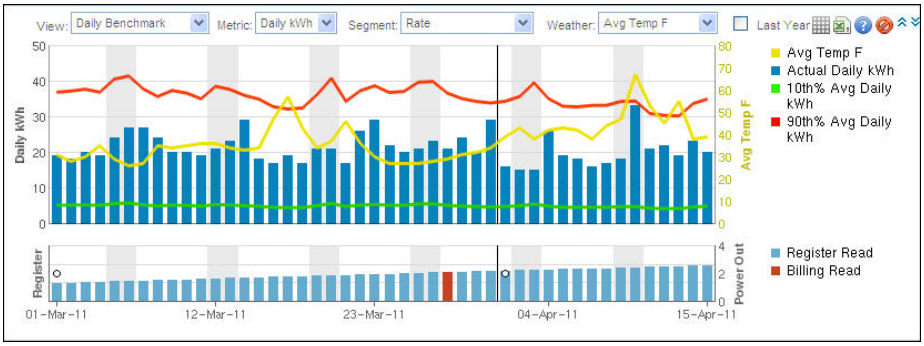
**Metric Selector**


You can select different metrics based on the type of meter you are looking at.

**Segment Selector**


You can also compare the meter's consumption against other, similar meters. This could be all other meters in the same zip code, on the same line transformer or circuit, or all the meters in the same rate class. These types of meter groups are called "segments", and can be selected using the "Segment" dropdown.

The following shows the benchmark panel with the "Rate" segment selected:




When you select a segment, two additional lines are shown. These represent the 10th and 90th percentiles of the group of meters you're comparing this meter to. The red line indicates the 90th percentile, so in the previous screenshot, 90% of all meters in this meter's rate class used less than

the amount indicated by the red line each day. Likewise, 10% of meters in this meter's rate class used less than the green line.

In this example, we can see that this meter has a fairly typical usage pattern with regards to its rate class because all of the blue bars are between the red and green lines. In other words, its consumption usage is in the middle 80% of its rate class every day of the period shown.

### Colors and Value Tags

The colors and value tags are explained below.

| Color | Name | Tag | Description |
|---|---|---|---|
| | Actual Consumption | CSM | The CSM value is the actual consumption value for the 24-hour period ending with a midnight reading. We expect to see a CSM value for all daily AMR/AMI meters everyday. |
| | Interpolated | CCS | The CCX value is a consumption value derived from either non-sequential readings or readings that do not come at the anticipated time. The CCX value is the interpolation of received register readings over the period of missing or late readings. |
| | Estimated | EST | The estimate value is derived based on the meter's historic usage factor and the usage factor of its peers on a day where Oracle Utilities Analytics Cloud Service does not receive a register reading. Estimates are only derived for meters that are Active status and will not be derived for a period longer then 90 days. If a subsequent register reading is received, the estimated value(s) will be replaced by interpolated values over the period of missed reads. |
| | Last Year | CSM | When the "Last Year" checkbox is selected, the meter's consumption for the same time window in the previous year will be overlaid over the Daily Consumption chart. |
| | Weather | varies | You can select a weather metric to view on top of the consumption data by using the "Weather" dropdown. This is generally temperature by default, but you can choose from other variables such as humidity, dew point, etc. |
| | 90th & 10th Percentiles in Segment | n/a | If you have selected a segment using the "Segment" dropdown, you will see two additional lines on the chart. These lines represent the 90th and 10th percentiles of the meter class you have chosen. |

## Register Read Chart (Bottom)

The bottom chart shows the actual register reads that are used to calculate the daily usage. Each type is distinguished by its own unique color and tag. The tag can be found in the text displayed when you place your mouse over the read. The descriptions are as follows:

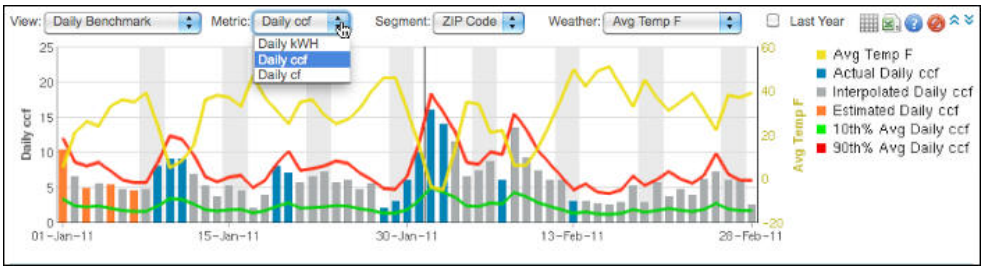
| Color | Name | Tag |
|---|---|---|
| | Daily Register Read | varies - see below |
| | Billing Register Read | varies - see below |

## Register Tags

Register Tags are 3-letter codes that describe the data source of the register read.

| Register Tag | Description |
|---|---|
| ADR | L&G AMR daily read |
| ABR | L&G AMR billing read |
| CBR | CSS/CIS billing register read |
| CIR | CSS/CIS informational register read |
| DBR | LodeStar register read |
| MNR | FCS register read |
| PRR | FCS probed register read |

# 2. Daily Premise Benchmark




The Daily Premise Benchmark panel is currently the default panel displayed on the Premise Data Explorer screen. The default screen will have 1 panel for each commodity at the Utility Client (up to 3--Electric, Gas, Water). The Daily Premise Benchmark panel displays the total derived Daily Consumption for all meters at the premise, as provided by the utility's AMR/AMI system. That is, if there are 2 electric meters at a premise, the aggregate consumption will appear on the Daily Premise Benchmark panel. In addition, each chart contains other derived and received data sources for analysis. Below is a more detailed description of the chart.

## Daily Consumption

The Daily Consumption chart is populated by default with the Daily Consumption data for all meters of the same commodity at the Premise. The units displayed are in daily kWH, daily ccf, or daily cf for electric, gas, or water meters respectively. Each vertical bar represents a single day's consumption. The color and value tag (visible on mouseover) represent different types of derived consumption values. Any other available consumption values are available in the "Metric" selector. Selecting between different options in the 'Metric' drop-down will allow you to switch between commodities.

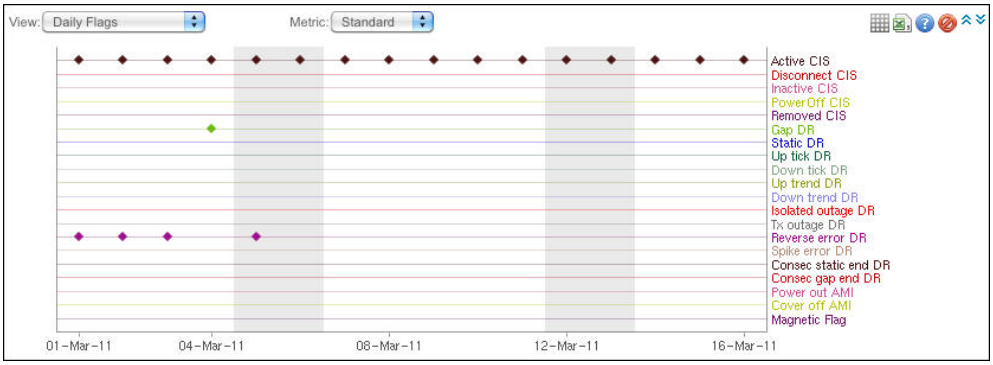
The colors and value tags are explained below:

| Name | Tag | | Description |
|---|---|---|---|
| Actual | CSM | | The CSM value is the actual consumption value for the 24-hour period ending with a midnight reading. We expect to see a CSM value for all daily AMR/AMI meters everyday. |
| Interpolated | CCX | | The CCX value is a consumption value derived from either non-sequential readings or readings that do not come at the anticipated time. The CCX value is the interpolation of received register readings over the period of missing or late readings. |
| Estimated | EST | | The estimate value is derived based on the meter's historic usage factor and the usage factor of its peers on a day where Oracle Utilities Analytics Cloud Service does not receive a register reading. Estimates are only derived for meters that are Active status and will not be derived for a period longer then 90 days. If a subsequent register reading is received, the estimated value(s) will be replaced by interpolated values over the period of missed reads. |
| Last Year | CSM | | When the "Last Year" checkbox is selected, the meter's consumption for the same time window in the previous year will be overlaid over the Daily Consumption chart. |

| Name | Tag | | Description |
|---|---|---|---|
| Weather | Varies |  | The horizontal yellow line displays the weather variable. Different weather options are available using the "Weather" selector. Alternatively, the weather line can be removed altogether by selecting the bottommost option, which is a blank field. More information is available on the weather data in the Weather section. |
| Segment | n/a |  | When a segment is selected using the "Segment" selector, a red horizontal line is displayed to represent the 90th% percentile value of the relative population. Note: not all segments may be available for all meters. |
| Segment | n/a |  | When a segment is selected using the "Segment" selector, a green horizontal line is displayed to represent the 10th% percentile value of the relative population. Note: not all segments may be available for all meters. |

# 3. Daily Flags

The Daily Flags Panel is the second of the two default panels in the Explore screen. It is used to display information on flags associated with the point and time period in question. Flags are a particular type of data stored in the Oracle Utilities Analytics Cloud Service system. They are event-like data elements that reflect a state, a flag or a status for a particular day. You can find more information on general Oracle Utilities Analytics Cloud Service elements, including flags, in the Major Data Elements section.




The screenshot above shows a standard flag panel. Each line represents a different type of flag, labeled on the right of the panel. The diamonds on each line indicate the occurrence of a particular flag on a particular day. In the example above, the flag 'Gap DR' was set on March 4, 2011. The shaded areas in the graph represent the weekends.

Flag names can indicate the provenance of each flag. Flags labeled CIS are derived from CIS data. Oracle Utilities Analytics Cloud Service derives flags labeled 'DR'. Flags labeled AMI are generated by AMI systems. Please consult the Major Data Types section for more information on the definition of each flag.

You can use the Metric drop down to select different types of flag panels. Depending on your implementation, you may have more than one type of flag panel available. Consult information on your particular implementation for further details.

## Additional Information

Oracle Utilities Analytics Cloud Service can configure the order and content of the flag panels.

# 4. Daily Load Profile

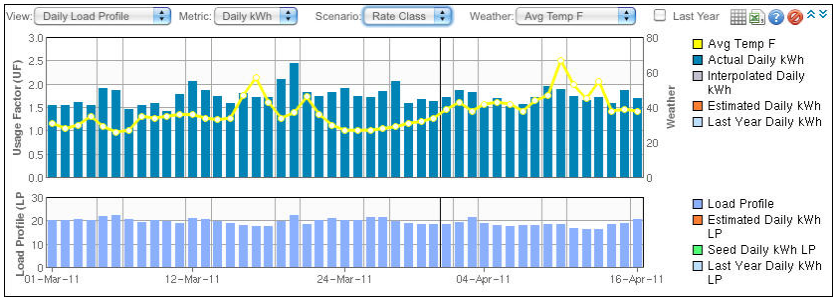
The Daily Load Profile panel allows users to view the daily usage factor of the point selected, along with the daily load profile of the class that corresponds to the usage factor. In Oracle Utilities Analytics Cloud Service, all meter points can be assigned to a particular class of meters for profiling purposes. By default, all meters are assigned to a rate class (meaning that all meters with the same rate are put in the same category). Oracle Utilities Analytics Cloud Service then automatically calculates a load profile for the rate class, as well as a usage factor for each meter, as follows:

The load profile is the average usage, day by day, of all of the meters in the rate class.

The usage factor is the factor, for the point in question, that must be applied to the load profile to obtain the point's usage.

The usage factor is calculated daily, and therefore varies on a daily basis. A meter with a usage factor of 1 is a meter that is consuming exactly the same amount as the class average. Load Profiles and usage factors are useful in separating the behavior of a particular meter from the overall behavior of the rate class.

The screenshot below shows an example of the Load Profile Panel. There are two separate charts: the upper chart shows the usage factor for the chart in question, and the lower chart shows the load profile for the rate class in question.




The Daily Load Profile Panel lets you select the following options using drop-down selectors:

Use the Metric drop-down to select a different metric to show for the meter in question. Most implementations will have one of kWh, CCF or CF as the only metric available.

Use the Scenario drop-down to select the class for comparison. Most implementations will only have Rate as a scenario

Use the Weather drop-down to select what weather variable to display in yellow on the chart.

The legend for each chart shown in the Daily Load Profile panel is as follows:

## Usage Factor

| Style | Type | Description |
|---|---|---|
| | Weather | Line showing weather variable selected |
| | Daily Consumption | Daily consumption bar |
| | Interpolated Consumption | Interpolated consumption is displayed when register reads were missing but later register reads were available |

| Style | Type | Description |
|---|---|---|
| | Estimated Consumption | Estimated consumption is displayed when register reads are missing and no later register reads are available |
| | Last Year | If the Last Year check box is marked, displays the data for last year |

## Load Profile

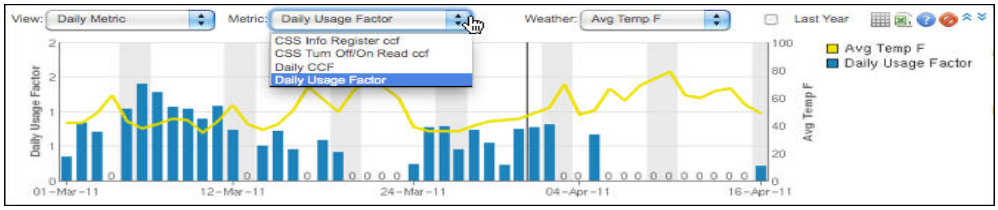
| Style | Type | Description |
|---|---|---|
| | Load Profile | Load Profile Usage Bar |
| | Estimated Load Profile | If Load Profile is Estimated, Bar will be gray |
| | Seed Load Profile | Initial Value used for calculation of load profiles. Only used for internal purposes. |
| | Last Year | If the Last Year check box is marked, displays the data for last year |

# 5. Daily Metric

The Daily Metric panel provides several options for views of additional daily metrics. These options vary by Utility client as well as by commodity. Users can view a sub-set of calculated Metrics, overlaid with weather information.

This panel may be useful in conjunction with the Daily Benchmark panel, in order to understand the level of a meter or premises' weather-sensitivity. (Usage Factor is also available on the Daily Load Profile panel.)

Users can also check the 'Last Year' option to view the previous year's metrics overlaid.




Some commonly available Metrics include:

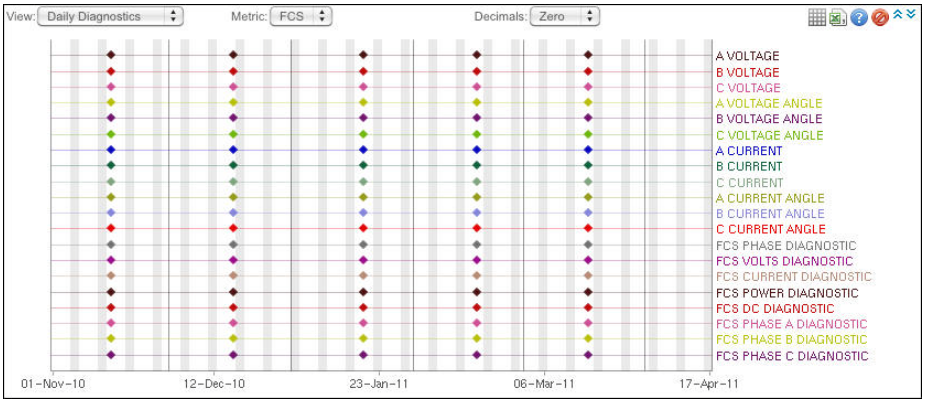
- Daily Consumption
- Daily Usage Factor
- Weekday and Weekend Consumption
- Outage Length

## Additional Information

Oracle Utilities Analytics Cloud Service can configure the order and content of the Metric panel.

# 6. Daily Diagnostics

The Daily Diagnostics panel is a specialized panel that allows users to review data from certain metering systems that provided diagnostics data, such as voltage, current, and phase angles. Some of the diagnostics are obtained every day, while others are obtained less frequently. The screen shot below shows the daily diagnostics panel for certain probed meters.

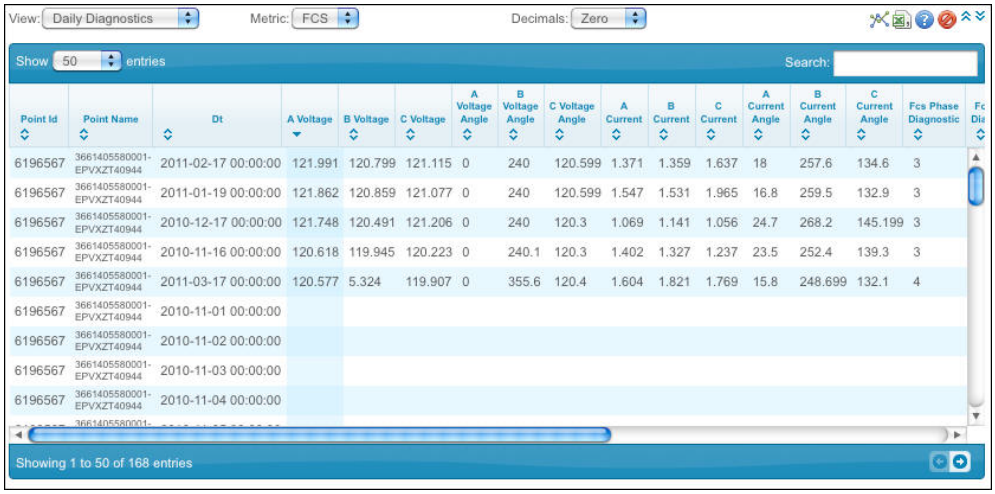



The Daily Diagnostics panel is organized much like the Daily Flag Panel. Each line represents a different type of diagnostic, labeled on the right of the panel. The diamonds on each line indicate the occurrence of a particular diagnostic on a particular day. In the example above, the meter receives all diagnostics at set intervals (about once a month). The shaded areas in the graph represent the weekends.

Diagnostic names can indicate the provenance of each diagnostics. In the example above, all diagnostics are from the FCS system.

You can use the Metric drop down to select different types of diagnostics panels. Depending on your implementation, you may have more than one type of panel available. Consult information on your particular implementation for further details. Please consult the Major Data Types page for more information on the definition of each diagnostic.

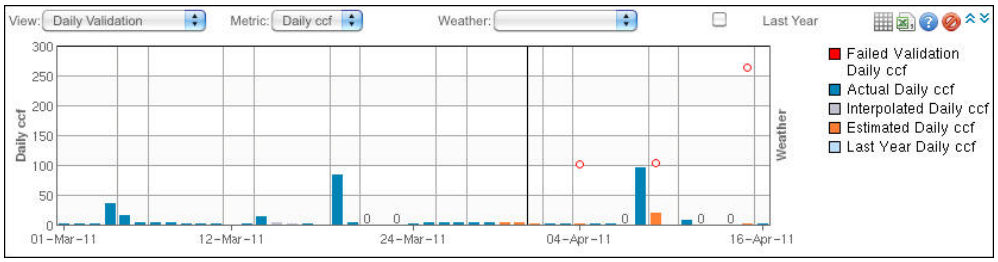
The Daily Diagnostic panel is typically best viewed in tabular format rather than chart format. You can toggle to the table format by clicking on the grid-like (  ) icon on the top right of the graph. Instead of seeing just a diamond, you'll actually see the values associated with the diagnostics, as illustrated in the table below.




The table view allows you to sort the data, search for particular data, and control pagination using the controls at the top of the table.

# 7. Daily Validation

The Daily Validation Panel allows users to allows the user to see consumption values that fail validation, overlaid against actual calculated (estimated) consumption. The values shown on this panel are identical to the Daily Benchmark Panel , except when there is a consumption value that failed validation. In such a case, the consumption value that failed validation shows up as a red circle or a red line on the chart. Below is an example of a the Daily Validation Panel:




In the example above, you can see how the chart is displaying data points that have failed validation using red circles. It also shows the values that the system is using instead.

The Daily Validation Panel lets you select the following options using drop-down selectors:

Use the Metric drop-down to select a different metric to show for the meter in question. Most implementations will have kWh, CCF or CF as the only metric available.

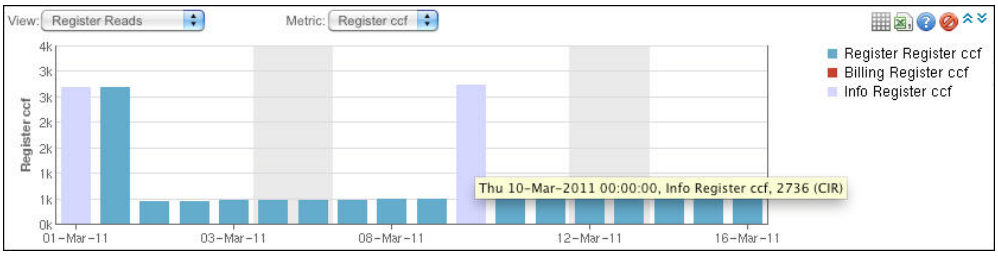
Use the Weather drop-down to select what weather variable to display in yellow on the chart.

The legend for the panel is as follows:

| Style | Type | Description |
|---|---|---|
| | Weather | Line showing weather variable selected |
| | Failed Validation | |
| | Actual Daily Consumption | Daily consumption bar |
| | Interpolated Consumption | Interpolated consumption is displayed when register reads were missing but later register reads were available |
| | Estimated Consumption | Estimated consumption is displayed when register reads are missing and no later register reads are available |
| | Last Year | If the Last Year check box is marked, displays the data for last year |

# 8. Register Reads

The Daily Register Reads panel shows all register reads for a particular point over a particular time period. This panel operates slightly differently than other panels, in that it displays data sequentially over time, but allows multiple reads with the same time stamp. This behavior allows users to view the register reads obtained from multiple data sources next to each other, and to compare one register read to another register read for the same day. For example, you can use the Daily Register Reads panel to compare informational, manual or audit reads to automatic reads, as they will all be displayed next to each other. Below is an example of a register read panel.




In this example, you can see how one register read is out of bounds with respect to the other register reads that surround it. It is an informational register read, whereas the others are automated register reads. You can hover your mouse over any of the reads in the panel, and you will find information about the register read in question, as shown in the example above. The information displayed when you hover includes the value tag of the register read, which provides information about the provenance of the data point in question.

For further information on a particular register read, you can double-click on any of the bars displayed, and obtain information on the transaction and source of a particular data point. With proper access privileges, you can view the logs of the transaction that created or updated the data point.

# 9. Segment Distribution

The Segment Distribution panel allows users to see how the meter and the segment they choose compare to other segments, based on a chosen Metric and Value.


## Additional Details

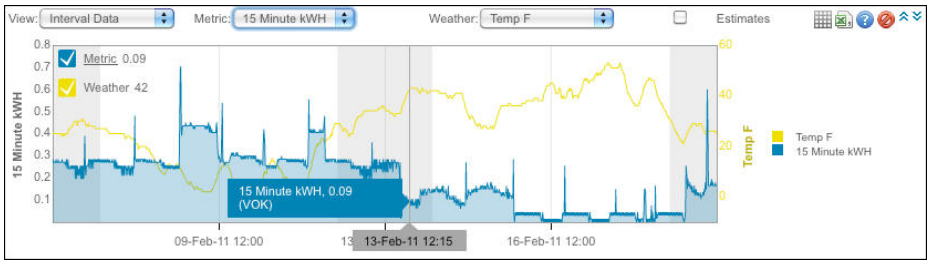
Segment and Metric drop-downs can be configured per Utility client request.

# 10. Interval Data

The Interval Data Panel allows users to view interval data for meters that support interval data. In Oracle Utilities Analytics Cloud Service, interval data is defined as any sub-daily data, such as hourly or 15-minute data.

## Accessing the Interval Data Panel

Users can access the Interval Data Panel in the Explore screen, either by clicking on the Panel Selector (View) dropdown, or by using the Add Panels section at the bottom of the page. There are limitations to the time frames allowed for interval data viewing (see below). Also, many interval meters are posted with a lag, so it is possible that the meter you select does not have data to display for the period selected.




The screenshot above shows the data displayed by the interval panel. Just as with the Daily Benchmark panel, as you scroll over the chart, you can see the underlying consumption data, and associated value tags. You can click on the checkbox buttons ( or ) to turn on or turn off a particular data type.

## Data Display Limitations

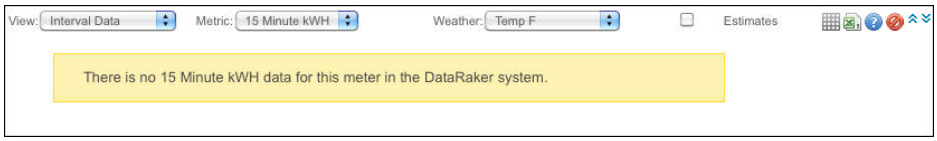
Because interval data requests can quickly results in large volumes of data, Oracle Utilities Analytics Cloud Service has limited the number of data points that can be retrieved using the interval data panel. The limitations are as follows:

- 6 weeks for 15-minute data
- 3 months for 30-minute data
- 6 months for 60-minute data

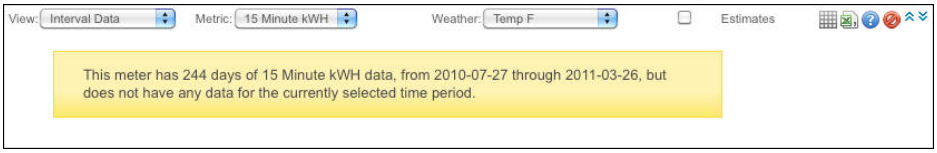
If users request more data than the limits above allow, the system will display an error message, then adjust the end date of the period selected to comply with the restrictions. Note that requesting data for long time periods, even if they are within the limits above, will take longer to process.

## Data Availability Messages

If a user requests interval data for a meter that does not have interval data, the system will post a message explaining this, as can be seen below.



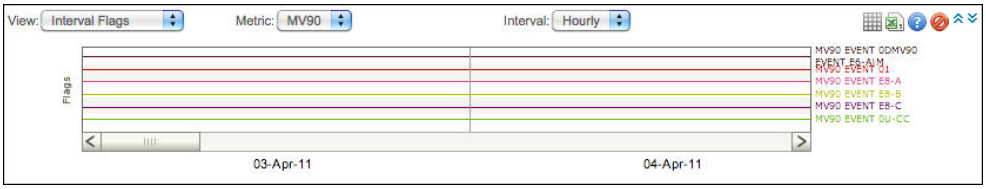

If a user requests interval data for a meter that has interval data in a period outside of the time-period selected, the system will also post a message to that effect, as can be seen below.



# 11. Interval Flags

The Interval Flags Panel is very similar to the Daily Flags panel. It is used to display information on flags associated with the point and time period in question. The difference with this panel is that the flags are associated with interval data meters and/or sources.

Flags are a particular type of data stored in the Oracle Utilities Analytics Cloud Service system. They are event-like data elements that reflect a state, a flag or a status for a particular day. You can find more information on general Oracle Utilities Analytics Cloud Service elements, including flags, in the Major Data Types section.




The screenshot above shows an example of the interval flag panel. Each line represents a different type of flag, labeled on the right of the panel. The diamonds on each line indicate the occurrence of a particular flag on a particular day (in the example above, there are actually no events). The shaded areas in the graph represent the weekends.

Flag names can indicate the provenance of each flag. Please consult the Major Data Types page for more information on the definition of each flag.

You can use the Metric drop down to select different types of flag panels. Depending on your implementation, you may have more than one type of flag panel available. Consult information on your particular implementation for further details.

You can use the Interval drop down to view flags on a daily or interval basis. Depending on the data source, some interval flags are set on a daily basis, while others can be set on an interval basis.

## Additional Information

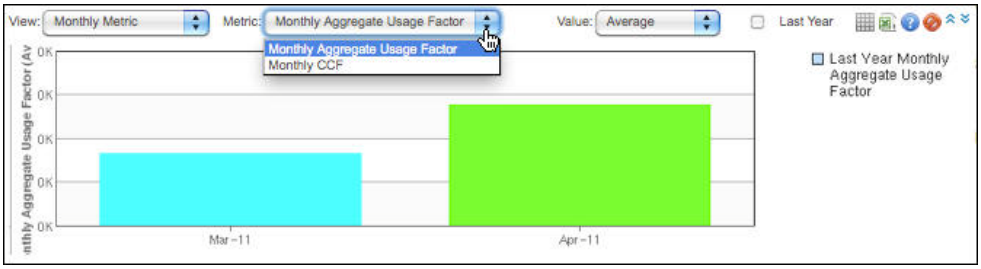
Oracle Utilities Analytics Cloud Service can configure the order and content of the flag panels.

# 12. Monthly Metric

The Monthly Metric panel provides several options for views of additional monthly metrics. These options vary by Utility client as well as by commodity. Users can view a sub-set of calculated monthly metrics, such as Monthly CCF and Monthly Aggregate Usage Factor.

The value of the bars can be adjusted to show 'Average', 'Aggregate', or 'Standard Deviation' of selected metric. Additional methods can be added if needed by the Utility.

Users can also check the 'Last Year' option to view the previous year's metrics overlaid.

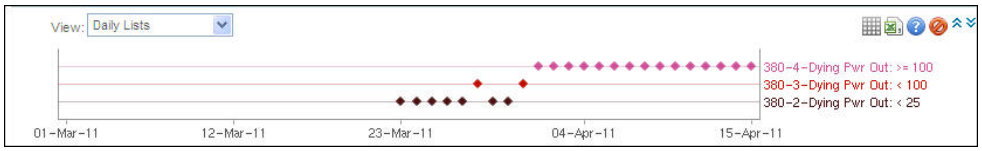



## Additional Information

Oracle Utilities Analytics Cloud Service can configure the order and content of the Metric panel.

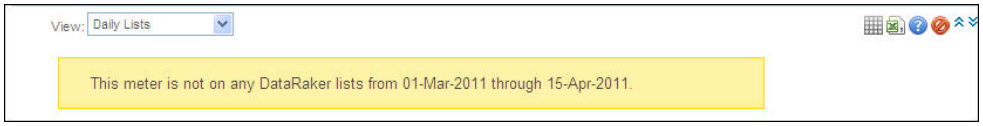
# 13. Daily Lists

The Daily List Panel shows which on what lists a meter has been placed on a day-by-day basis. Each line represents a list, and each diamond represents a day on which the meter was flagged for that list.




The screenshot above shows a meter that appeared on the 380-2 Dying Pwr Out: < 25 list on March 23, hopped between that list and the 380-3 Dying Pwr Out: < 100 list a couple of days later, and then finally ended up on 380-4 Dying Pwr Out: >= 100.

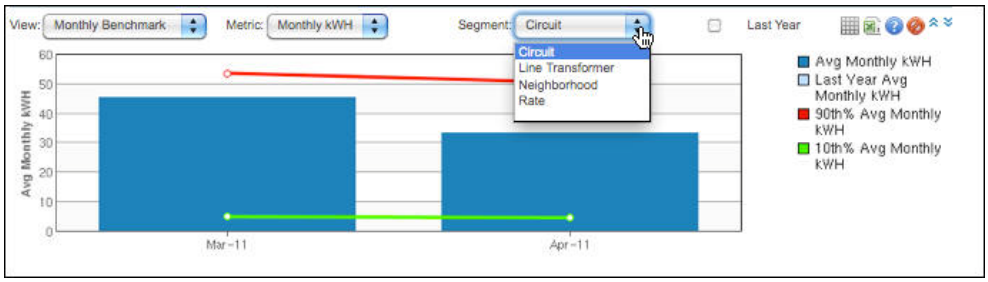
If a meter is on no lists during the selected time period, the following message will be shown:



# 14. Monthly Benchmark

The Monthly Benchmark panel is similar to the standard Daily Benchmark panel and provides consumption aggregated to the Monthly level. Unlike the Daily Benchmark panel, there is no Register Read chart below the Consumption chart.

The Monthly Consumption chart is populated by the Monthly Consumption data for the meter commodity. The units displayed are in Monthly kWh, monthly CCF, or monthly CF for electric, gas, or water meters, respectively. Each vertical bar represents a single month's consumption. The color and value tag (visible on mouseover) represent different types of derived consumption values. Any other available consumption values are available in the "Metric" selector.

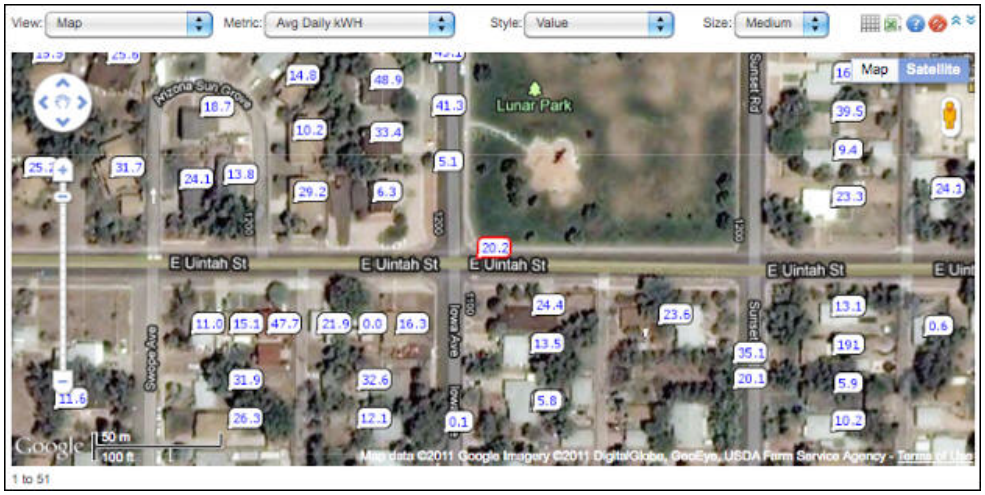



| Name | | Description |
|---|---|---|
| Avg Monthly Consumption | | Daily Consumption aggregated to the month |
| Last Year | | When the "Last Year" checkbox is selected (highlighted above in red outline), the meter's consumption for the same time window in the previous year will be overlaid over the Daily Consumption chart. |
| Segment | | When a segment is selected using the "Segment" selector, a red horizontal line is displayed to represent the 90th% percentile value of the relative population. Note: not all segments may be available for all meters. |
| Segment | | When a segment is selected using the "Segment" selector, a green horizontal line is displayed to represent the 10th% percentile value of the relative population. Note: not all segments may be available for all meters. |

# 15. Map Panel

The Map panel provides a GoogleMap overview of the premise in the context of its neighbors. The Map panel allows users to quickly compare a customer's metrics against their neighbors' and allows users to easily view outliers.

The meter or premise selected is highlighted in red. Users can toggle between Map or Satellite views and zoom in or out as necessary. Note: zooming too far out will produce results where icons are forced to overlap with each other and become indecipherable. This also slows the system down. It is advised that users zoom out incrementally.




This view is available through Google Maps, which is updated periodically. Meter and premises are geo-coded and where possible, the icon containing the metric is placed above the center of the plot.

## Additional Detail

- Metric options, in CCF or kWh, for time period selected in Date Selection:
  - Avg Daily
  - Total CCF
  - Avg Daily/Sq Ft
  - Max Daily
  - Min Daily
  - Standard Deviation
- Style options:
  - Value - actual numeric value of Metric chosen above
  - Various colored bulb icons - Yellow, Black, Red, Blue, Orange, Green
  - Size options- Icons can be in 1 of 3 sizes: small, medium, or large

## Additional Information in Pop-Out - Access By Clicking on Icon

- Util ID
- Rate
- Square Feet (where available)

# Chapter 6

# Premise Data Explorer

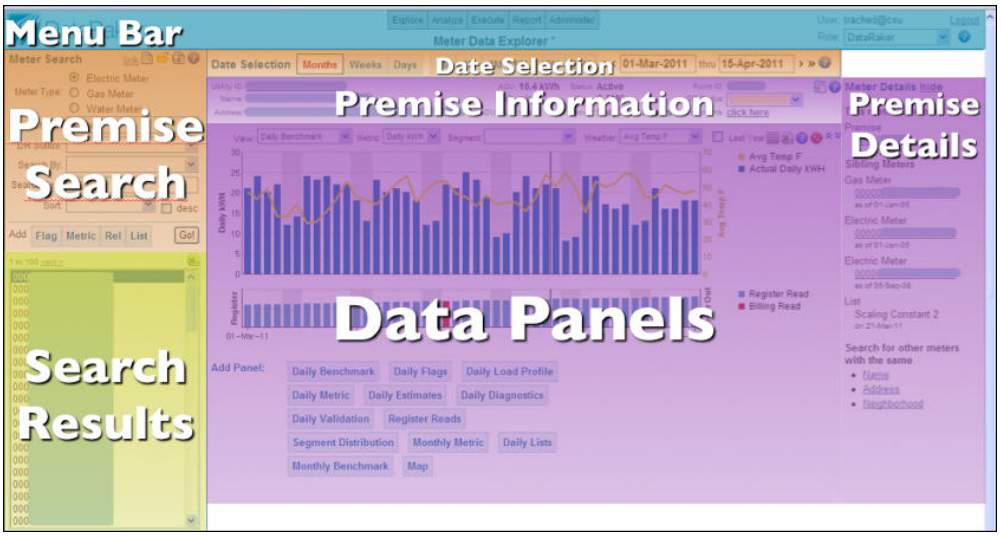
The Premise Data Explorer Screen is accessible from the Oracle Utilities Analytics Cloud Service User Interface menu. This screen is a secondary screen for users to access premise-level data and perform powerful ad-hoc queries on the Oracle Utilities Analytics Cloud Service system.

To navigate to this page, go to menu in the center of the page and click Explore > Premise Data Explorer.

This screen can be customized on a per-client basis.

## Screen Layout

The Premise Data Explorer is organized into distinct areas, mirroring the Meter Data Explorer, as illustrated and explained below:




This view is available through Google Maps, which is updated periodically. Meter and premises are geo-coded and where possible, the icon containing the metric is placed above the center of the plot.

# Basic Premise Search

## Premise Data Explorer Search


Search is the heart of the Premise Data Explorer screen. With it, you can find a particular premise, or a set of premises that meet very simple or very complex criteria.

### Status


Here, you can select the status of the premise(s) you are looking for. This status reflects the meter status at the premise.

### Role Status


The Role Status is a special status that is specific to the Role that you are in.

### Text Search


The two controls labeled 'Search By' and 'Search Text' work together to allow you to search many of the fields in our database, such as account name, address, account number, zip code, etc.

To use the text search, first choose a field to search on in the 'Search By' dropdown. Then, enter some text in the 'Search Text' field. The Oracle Utilities Analytics Cloud Service system will then look for all meters whose fields start with that text, so searching for "abc" will match "abc", "abcde", and "abcdefgh", but "not xyzabc".

You can construct more advanced searches by using the % wildcard. Searching for "123%EM" will match text that start with "123" and then contains "EM" afterwards, like "1234-EM-4567".

### Sort


Use the Sort dropdown to control the order in which your search results are shown. The results are sorted in ascending order (1,2,3) by default, but checking the 'desc' checkbox will result in them being sorted in descending order (3,2,1).

## Saving Filters (Searches)


Filters are commodity specific and can be saved privately or shared with colleagues using the icons at the top of the search box.

## Reset Filter

Clear the current filter. Any changes you made will be lost. This action cannot be undone. Be sure to save the filter if you wish to access it later.

## Load Filter

Load a saved filter. In the Load Filter screen: select Private to see filters that you saved, or select the role to see filters which are shared with colleagues in your current role.

## Save Filter

Save current filter. The filter can be saved as either private or shared with your role. A filter saved as private will only be available to you. You can share your filter with colleagues by selecting the role from the drop down menu. Anyone who uses the role will be able to use the filter.

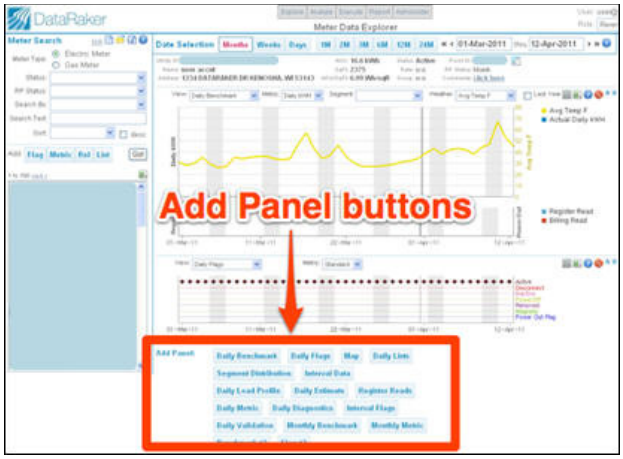
# Panels

The Data Panels (or just "panels") are where consumption and event data is displayed on this screen. Each panel shows you different information about the meter or premise you have selected, over the time period selected in the Date Selector.

- Daily Premise Benchmark
- Daily Flags
- Daily Metric
- Monthly Metric
- Monthly Benchmark
- Map Panel

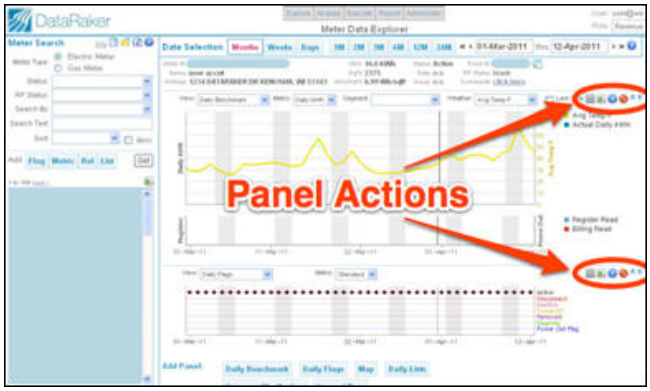
## Changing or Adding Panels

The screen defaults to two panels upon loading, but users can easily change panels by clicking on the 'View' drop-down at the top left of every panel. Users can also add panels by using the add panel buttons below the last panel, as illustrated below.




The "Add Panels" buttons enable you to add another panel into the current view.

## Panel Actions




The following actions are available at the upper right-hand corner within each of the data panels.

### View Panel Table

 View the selected chart data in a segmented spreadsheet. Use to toggle back to the chart-view.

### Export Chart Data

 Export the selected chart data into a CSV file for offline viewing in Microsoft Excel.

### Help

 View a help page specific to the panel.

### Remove

 Remove this panel from the screen.

### Move Up or Down

 Moves the panel up or down in relation to the other panels.

# Date Selection

## Data Selection Bar


The date bar at the top of the screen determines the time period for all of the data shown below. Each of the charts will start and end on the dates shown in the date bar. Here are the components that make up the Date Selection Bar:

### Increment Selector


The increment selector affects how the rest of the date controls operate.

When MONTHS is selected, the Quick Select bar shows 1M 2M 3M 6M 12M 24M, and the single arrows in the Date Selector ( and ) move the dates by a single month.

When WEEKS is selected, the Quick Select bar shows 1W 2W 3W 4W 5W 6W, and the single arrows in the Date Selector ( and ) move the dates by a single week.

When DAYS is selected, the Quick Select bar shows 1D 2D 3D 5D 7D 10D, and the single arrows in the Date Selector ( and ) move the dates by a single day.

### Quick Select Bar


The quick select bar allows you to access the most recent data with a single click. Clicking "2M" will select the most recent two (2) months of data. Likewise, clicking 10D will select the most recent ten (10) days of data. Your choice of increment (months, weeks, or days) determines which of these bars is shown.

### Date Selector


The text boxes are used to select the start time on the left and the end time on the right. The outside double arrows  and  move the date either forward or backward in the selected increment.

# Standard Point Information

## Point Information


This section of the Data Explorer displays high-level information about the meter or premise, such as the Utility ID, the Name and Address of the account, the area and average daily usage (ADU), and the Rate and Group to which this Meter or Premise belong. The following information is displayed:

- UTILITY ID - The unique ID that Oracle Utilities Analytics Cloud Service uses based on your utility identifiers to refer to the meter.
- NAME & ADDRESS - Based on information from the Utility Client and from normalized Tax-assessor records
- ADU - The ADU is the Average Daily Usage for the month of the most recent read. This number ALWAYS reflects the most recent data in our system - it does not change when you change the dates in the Data Explorer.
- POINT CHARACTERISTICS/DATA
    - SqFt
    - ADU/SqFt
    - Status
    - Rate
    - Group
- ROLE STATUS - Based on the Role selected, some users have the ability to further "tag" meters or premises for future use. These tags can help identify meters that are under investigation or otherwise merit further discussion. Each option is customizable and varies by

client and by role. If you are authorized to use this feature, you will have a yellow drop-down box in this section.

- COMMENTS - You can enter comments or view comments that others have left for each meter or premise.
- POINT ID - This is a system-generated unique identifier. Searches conducted using a point ID will return the fastest results.

### Print Data View

Use the Print Data View feature to export the Oracle Utilities Analytics Cloud Service onscreen graphs and charts to a custom on-screen report that can be saved or printed. Once the report is generated, the subsequent popup screen will give the option to print the report or save the report as a PDF. Note: the Map panel will not be included in the export.

## Meter Details

Users can find additional details about the meter selected on the right hand side of the screen. The meter details section, which can be shown or hidden, contains the following:

### Related-To Links

The first set of links displayed in the premise details show how the premise is related to other items in the system:

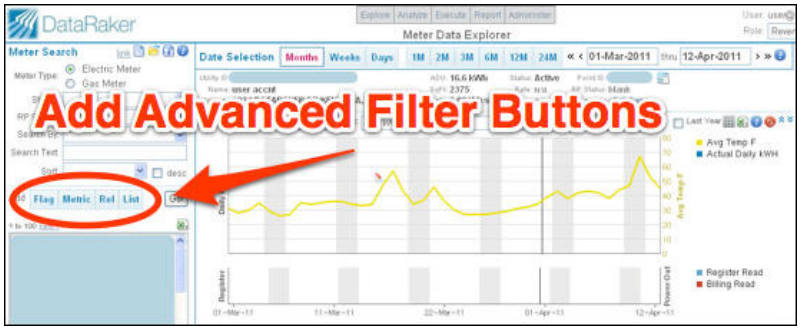
- Links to child meters (gas, electric, or water, as applicable), and as-of date of association
- Links to account(s) associated with the meter, and as-of date of association
- Links to module(s) associate with the meter, and as of date of association

### Search Links

At the bottom of the premise details, users can find some quick that perform searches in the system to find other premises with the same account name, address, building or neighborhood.

Note that all of the links above will open a new version of the meter or premise data explorer, and will do so in the same tab unless the user specifies they want a new tab by control-clicking or right-clicking on the link.

## Advanced Filter Search

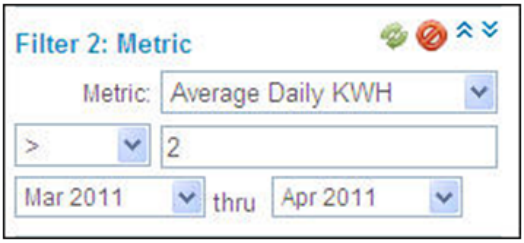



The advanced filters enable you to search all of the data we have in our system in a number of ways. Click on the button corresponding to the advanced filter you want to create, and the filter will appear below the Basic Search area.

## Advanced Filter: Flag


Flags are indicators of events. They identify specific patterns that meters or premises exhibit. Flags also alert occurrences of meter or premise-based issues. Some flags are an outcome of observed patterns.

## Advanced Filter: Metric




Metrics allow you to filter for meters that have a particular usage, for example, for a particular time period.

## Advanced Filter: Relation


Relations are attributes assigned to a meter or premise at any given instance of time. Examples of relations include Account, Zip Code, Bill Cycle, and Module Type.

## Advanced Filter: List


A specific list contains the results of an analytic calculation or test created in the Oracle Utilities Analytics Cloud Service system. One can find meters or premises that are caught by the test by conducting a search based on the list name and the dates in question. Note: most tests are conducted at the meter level and this option may not be populated for many clients in the Premise Data Explorer.

# Chapter 7

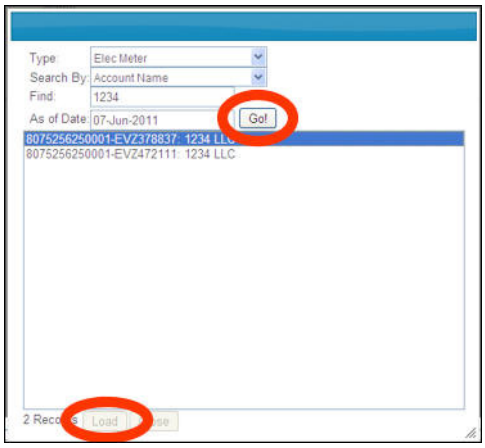
# Account Usage Summary Screen

The Account Usage Summary screen is accessible from the Oracle Utilities Analytics Cloud Service User Interface menu, under the Explore tab. This screen is designed to provide - on one page - a complete overview of all usage data (Electric, Gas, Water) for the account selected, and allows users to benchmark one account against others of the same type. Since all customer-specific information is conveniently presented in one screen, the Account Usage Summary screen is often the default screen for the Call Center role.

## Search

When you first access the screen, it displays a search form that allows you to search for a specific account, as shown below. Some browsers may consider the search form a 'pop-up' and block it per browser settings. If the search box does not appear, please check your browser settings.

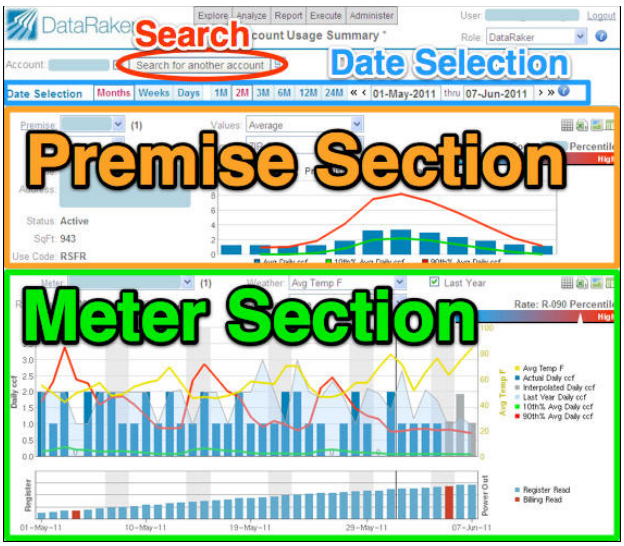
The search box allows you to search using a variety of methods including account number and account name. Contact Oracle Utilities if you would like to configure the search options.




Use the search box to input a criterion, and then click 'Go!' to return a set of accounts. Once the box below populates, select an account and click 'Load' to populate the Usage Summary screen. Users can also double-click on the selected Account to load the account.

After the Usage Summary screen is populated, you can initiate a new search by clicking on the 'Search for another account' button on the upper left-hand side of the screen.

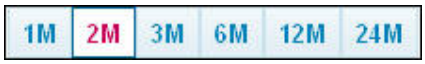
# Screen Layout




The main Usage Summary screen is comprised of 3 basic components: Date Selection, Premise-level information and Meter-level information as illustrated above.

## Date Selection

Date selection functions similarly to the Meter Data Explorer and Premise Data Explorer screens. The quick select bar allows you to access the most recent data with a single click. Clicking "2M", for example, will select the most recent two (2) months of data.




The date selectors are used to choose an exact start time on the left and end time on the right. The outside double arrows  and  move the date either forward or backward in the selected increment. The inside single arrows  and  move the date either forward or backward by one increment. The date range selected in this section controls the values shown in the rest of the screen.

## Premise Information


For the selected Account, the top portion of the screen shows a picture of aggregate consumption. The left-hand side displays basic information about the Premise. The right-hand side shows the monthly usage, along with the monthly usage of similar premises to put this premise into context.

## Basic Information

Refer to the diagram above for the location of the data elements described below.

| Number | Name | Description |
|---|---|---|
| 1 | Premise Identifier | The premise identifier (or service location identifier, depending on your configuration) is a drop-down field that allows toggling between different premises, if multiple premises are associated with the account selected. The number in parenthesis, immediately to the right of the Premise number, indicates the number of Premises associated with the Account. |
| 2 | Metric | In cases where there is more than 1 commodity, the Metric field allows users to toggle between electric (kWh), gas (ccf) and water (cf), as applicable. |
| 3 | Address | Basic Name and Address information is pulled from the Customer Information or Service System, or other source of record. |
| 4 | Status | The Status of the Premise is displayed, as of the end of the selected date range. |
| 5 | Tax Data | Basic information from tax assessor records, such as square footage and Use Code, is displayed if available. |

## Comparative Picture

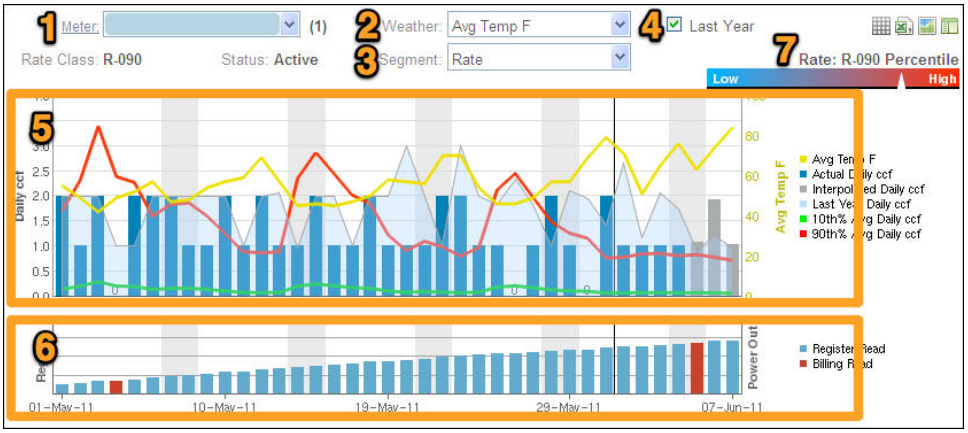
Immediately to the right of the premise information is a comparative picture that provides monthly consumption data for the premise and commodity in question (blue bars) as well as comparative information for other similar premises. Below are some details on the elements identified in the image above.

| Number | Name | Description |
|---|---|---|
| 1 | Values | This controls whether the blue bars are average or total consumption. You can toggle from one to the other. |
| 2 | Segment | This controls what comparative data is shown. The screen typically defaults to comparing the premise in question to other premises in the same zip code. Typical configurations also allow comparisons by Square footage, Use Code, Vintage (Year Built), or Market Value. These options depend on your configuration, so contact Oracle Utilities to inquire about other comparison options. |
| 3 | Chart | The chart shows the consumption for the Time period selected in blue bars. The comparison lines, in red ( , 90th percentile) and green ( , 10th percentile), show how the consumption compares to that of the peers. |
| 4 | Slider | The graphic above the chart shows how the premise ranks when compared to its peers. |

# Meter Information

The Meter Information panel is similar to the Daily Benchmark Panel in the Data Explorer screen. At the top is basic Meter information, including Rate Class and Status. The Utility ID can be toggled to select other meters at the same premise. A number to the right in parentheses indicates the number of meters at the premise.

The Meter Section contains the following items that correspond to the numbers in the image below:




| Number | Name | Description |
|---|---|---|
| 1 | Meter Selector | The meter selector contains all of the meters for the metric selected in the premise section above, and lets you choose one of them for which to view a daily consumption chart. |
| 2 | Weather Selector | The weather selector allows you to choose the weather metric that will be overlaid onto the Daily Usage Chart below. |
| 3 | Segment Selector | As with the premise segment selector above, the meter segment selector allows you to select a set of meters to compare this meter's usage to. In the Daily Usage Chart (#5, below), you will see the 90th and 10th percentile usage from meters in this meter's segment as red and green lines, and on the Segment Scale chart (#7, below), this meter's usage will show up as a white marker. |
| 4 | Last Year Checkbox | If this checkbox is checked, this meter's usage from the same period last year will be shown on top of the daily usage chart. Last year's usage is shown as a lightly shaded blue area. |
| 5 | Daily Usage Chart | This chart shows the daily usage for the selected meter over the period shown, in addition to the 90th and 10th percentiles for meter in this meter's segment, the weather, and the last year's usage (if selected). The Weather, Segment, and Last Year selectors affect what is shown here. |

| Number | Name | Description |
|---|---|---|
| 6 | Daily Register Reads chart | This chart shows the register reads delivered by the meter every day. Regular register reads are blue, and billing reads are red. |
| 7 | Segment Scale | This scale shows the usage this segment over the previous 12 months as a white marker in the context of premises in its segment. |

## Icons

On the top right-hand corner of both Premise and Meter Panels, there is a set of 4 icons:

| Icon | Name | Description |
|---|---|---|
|  | View Table | Displays Account data in table view |
|  | Export Data | Exports Account data to Excel format |
|  | Go to Map | This icon takes the screen to Map view. The new screen will replace the one you are on. If you would like to remain on the Usage Summary Screen, hold down the 'Control' key to open the screen in a new window. |
|  | Go to Data Explorer | This icon takes the screen to the appropriate Data Explorer (Meter or Premise). The new screen will replace the one you are on. If you would like to remain on the Usage Summary Screen, hold down the 'Control' key to open the screen in a new window. |

## Print and Export

You can export the contents of the page to a PDF document by using the  icon that is located above the date selection. This will create a PDF document, which you can then print or save.

# Chapter 8

# Relations

Relations screens are accessible from the Oracle Utilities Analytics Cloud Service User Interface menu. These screens allow users to view the geographic footprint of selected meters on a map, as well as view the types and counts of relations on the meter and premise level.

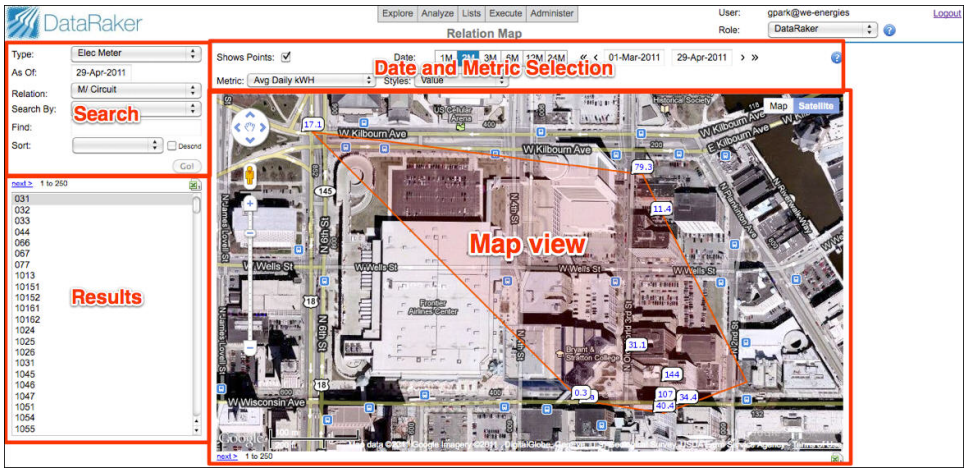
To navigate to these pages, go to menu in the center of the page and click Explore > Relations.

## Relation Map

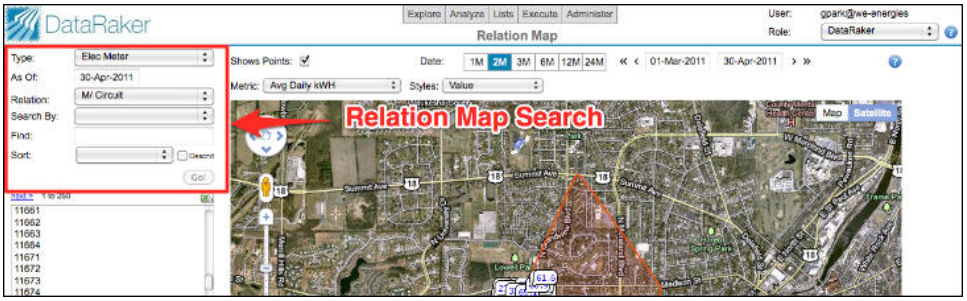
The Relation Map screen allows users to view a map showing the general geographic footprint of the selected devices. Users conduct a search by specifying a relation and the resulting meters or devices are then displayed on a map, which identifies the individual devices along with basic consumption information. While it is possible to customize the list of included relations, not all relation types can be added.

### Screen Layout

The Relation Map screen is organized into distinct areas as illustrated and explained below.



## Search



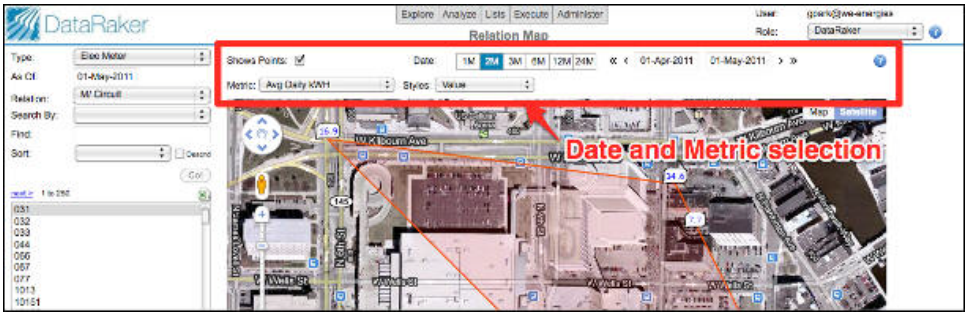

Users search for groups of devices to show in the map first by selecting from a pre-determined list of relations. Common relations include:

- Circuits
- Line Transformers
- Reclosers
- Routes or
- Zip codes

These options vary by utility, commodity, and available data.

Searches can usually be conducted by specifying Name or ID. Results can be sorted ascending or descending, if the 'Descend' box is checked. Click 'Go!' to initiate the search. Search otherwise functions as it does on the main Meter and Premise Data Explorer screens.

## Date and Metric Selection




This section of the Relation Map screen allows users to adjust the information presented in the map below.

### Show Points

The default screen has the Shows Points option selected revealing icons that identify the specific locations of individual devices on the map below. When this check-box is toggled off, the outline of the geographic footprint will remain but all device-specific information, including individual location and consumption, will be hidden. This option may be useful when users want to get a high-level view of the geographic footprint of the devices without cluttering up the screen with details.

### Date

Date selection functions similarly to the Meter and Premise Data Explorer screens.

The quick select bar allows you to access the most recent data with a single click. Clicking "2M" will select the most recent two (2) months of data.


The text boxes are used to select the start time on the left and the end time on the right. The outside double arrows **<<** and **>>** move the date either forward or backward in the selected increment. The inside single arrows **<** and **>** moves the date either forward or backward by one increment.

The date range selected in this section will determine the values shown in individual boxes in the map below.

### Metric


Users can select the metric they would like to see for each device in the map below. Common options include consumption metrics such as Avg Daily, Total, and Max/Min Consumption. The numbers represent the Metric selected for the Date range selected.

## Map View


The main screen displays a map scaled to show the geographic boundaries of the devices selected. This is represented by a thin red line, with transparent red filled in. The device's location is stored in the Oracle Utilities Analytics Cloud Service system in latitude and longitude (see geo-coding). Depending on the number of devices, individual devices have data bubbles centered over their locations, displaying data in the units selected in the Metric drop-down above.

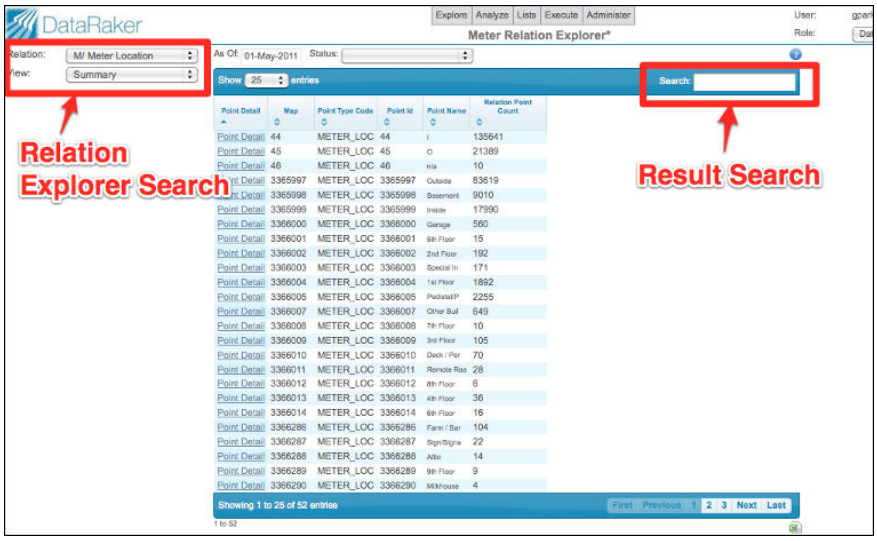
# Chapter 9

# Meter and Premise Relations Explorer

The Meter and Premise Relations Explorer screens allow users to see the full inventory of relations, their options (Point Name), as well as the counts per option (Relation point name). For example, 'Meter to Bill Cycle' is the Relation, but the options include 1, 2, 3, through 21, depending on the data available at the Utility.

These screens may be used to determine which relations are populated with meaningful data. For example, in the screenshot below, the results for the relation "Meter Location" are shown. By far the most populated options are 'I' and 'O', indicating that 'Inside' and 'Outside' may be the most meaningful options populated in relation "Meter Location."

## Relation Explorer Search and Result Screen



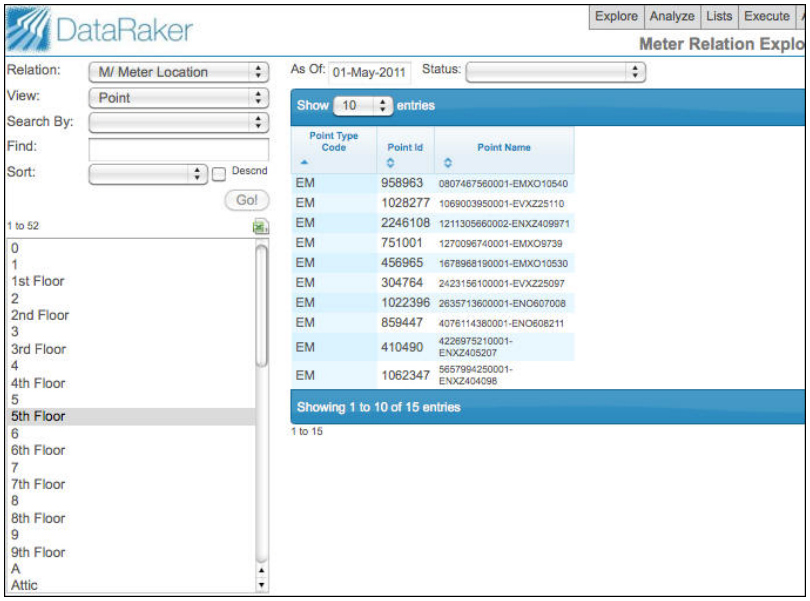

Conduct search by all available Relations in the system. As a relation is chosen, the system will automatically return the Summary of options, listing the first 10 options by Point ID. Users can change the number of options returned by adjusting the "Show entries" drop-down to 25, 50, or 100 returns.

The Database Tables pages will further explain how these data points are stored in the Oracle Utilities Analytics Cloud Service system.

After the summary of the selected Relation has populated the table, users can further search among the returns for specific text or numbers by typing into the Result Search bar on the upper right

Results can also be exported to an Excel file by clicking the  icon on the bottom right corner.

# Point Search




Though 'Summary' is the default, if 'Point' is selected in the View drop-down, a more detailed search option will appear. You can then search by Point ID or Utility ID and click 'Go!' to return all results that fit the above criteria. By selecting one of the results, you can see on the main screen a list of all points that fulfill that criteria, as shown above.

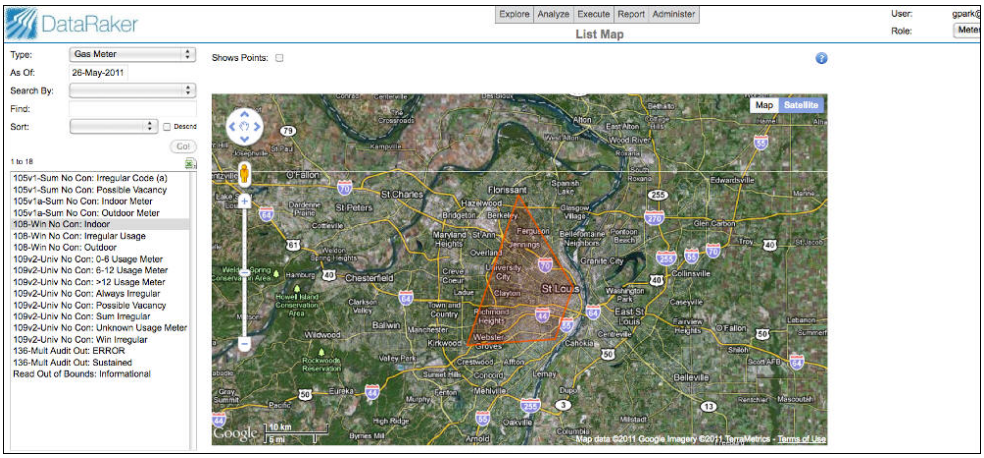
# Chapter 10

# List Map

The List Map screen allows users to view the geographic footprint of the list of results for a test. This may be useful in a number of ways including the option to group follow-up work by location, as well as getting an overview of the geographic reach of certain types of meter operations or revenue protection scenarios.

## Detail

Users can search for Lists to map in the upper left search area. After results are returned, users can select a test (list) to display the geographic footprint of the test.




Select the appropriate Role to display the list of desired test results. Choose the Type of meter (Gas, Electric, Water), as applicable. The system will automatically return all lists associated with the Role and Type of meter selected.

This page shows all active lists in current role that have polygons computed

## Show Points

The 'Show Points check-box' displays individual meter points within the geographic footprint displayed. The default view will often be at too high a view for the system to render in the User Interface--users will need to zoom in to see individual meters. Use the Date Selection bar to adjust the metric values displayed.

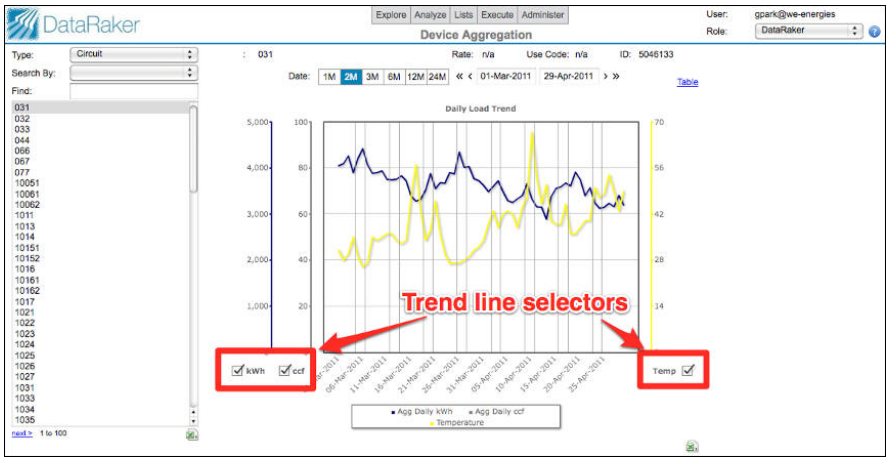
# Chapter 11

# Devices and Outages

The Analyze Devices and Outages screens allow users to get a high-level view of the status and consumption levels of groups of meters or devices.

Users can navigate to these screens by choosing 'Analyze' in the menu, and choosing 'Devices and Outages.'

## Device Aggregation




The Device Aggregation screen displays the aggregate consumption data for all meters within the selected hierarchy.

### Search and Navigate

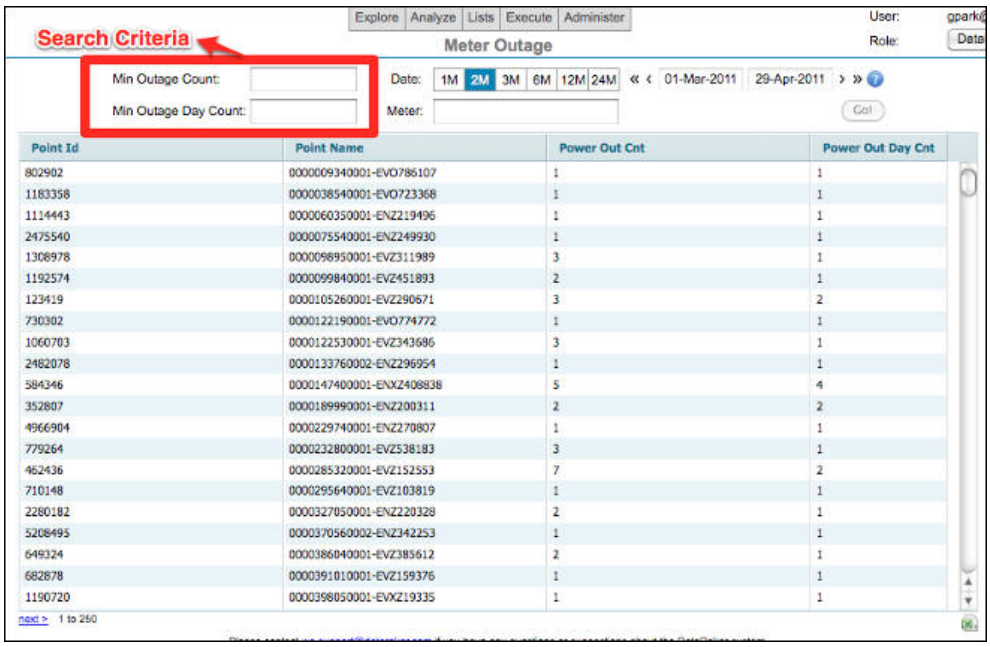
Start by selecting a type of device or group of meters, typically line transformers or circuits. Then choose Name or Point ID in the 'Search By' drop-down, and input your criterion. Press the 'Return' or 'Enter' key to display your results.

When a device or group of meters is selected, the aggregate consumption data will populate in the center of the screen for the default time period. The default view has lines for kWh, CCF, and temperature visible. For devices that are particular to a commodity (e.g. line transformers for electric meters), only the pertinent line will appear. To remove any lines, de-select the check-boxes to hide the trend lines. To adjust the time period presented, use the quick select bar or date selectors, similar to the Date Selection bar in the Data Explorer screens.

## Data

This screen allows users to quickly see overall consumption data for groups of meters in a distribution hierarchy. It can also show summary consumption data for non-physically related groups, e.g. program participants in Energy Efficiency. This screen can be configured to show other groups of meters, the lists of which can be loaded into the Oracle Utilities Analytics Cloud Service system. Once a particular segment is identified and selected for display on the Meter Analyze Device screen, the aggregations will update as new data is received, which is typically on a daily basis for most data points.

# Meter Outage



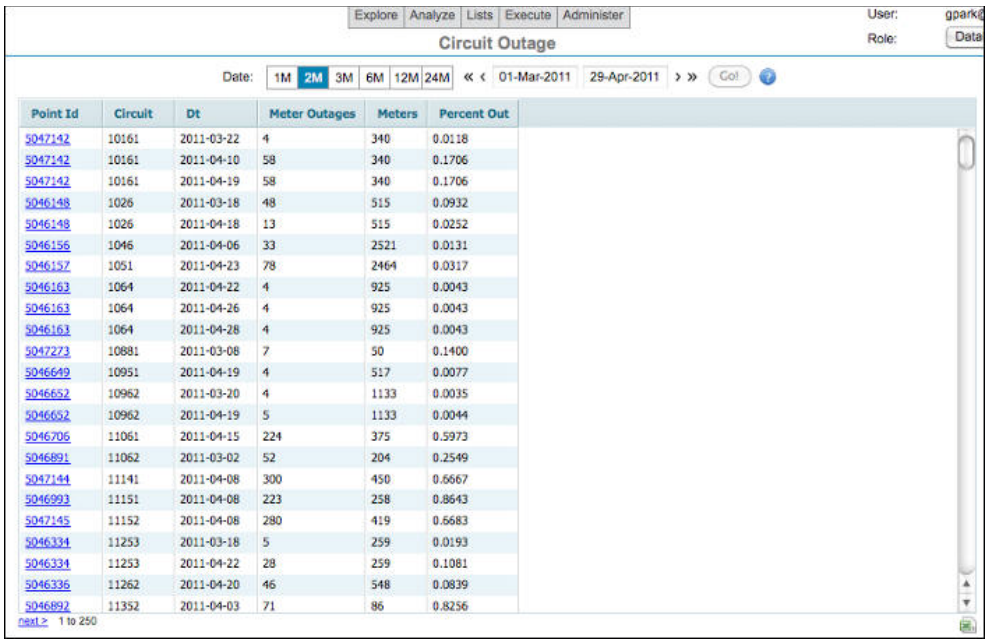

The Meter Outage screen provides a summary of meter outages in the system, allowing users to quickly access a summary of the most problematic meters, characterized by frequent power outs or days with power outs.

To find meters with outage issues, input a number in the Minimum Outage Count or a Minimum Outage Day Count search fields. Determine the time period for the search by using the quick select bar or date selectors, similar to the Date Selection bar in the Data Explorer screens. Click 'Go!' to initiate the search.

Users can also search for individual meters, by using the 'Meter' search box as well.

The resulting table lists meters with Point ID, Point Name (Utility ID), Count of the Power Outs as well as the count of days in which Power Outs are recorded.

# Circuit Outage




The Circuit Outage screen provides an overview of all Circuits in the system, along with indications of their relative performance.

## Search and Navigate

Select the time period for the summary by using the quick select bar or date selectors, similar to the Date Selection bar in the Data Explorer screens. Click 'Go!' to initiate the search.

The resulting table will populate with all Circuits with available data, listed by Point ID. Each row does not represent an individual circuit but instead, individual dates. Circuits with outages over multiple days will have each day grouped and listed together. Additional columns include Circuit name, Date of outages, count of outages, the total number of meters on the circuit, and the percentage of the total the outages represent.

To see additional Circuits, click on the 'next >' link on the bottom left of the table to see the next in the series. To export this data, click on the  icon on the bottom right of the screen.

## Data

Circuit outage data is stored on the meter level. Meter to Circuit mapping updates may happen infrequently (1-time or intermittently). The process to calculate the Percent Out numbers are run daily, as part of the standard aggregation processes.

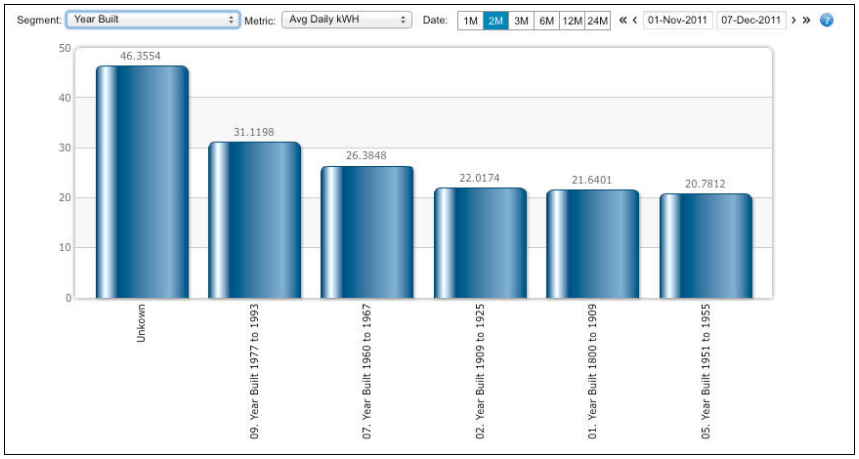
# Chapter 12

# Segment Distribution

The Segment Distribution screen allows users to get a quick overview of the distribution of various metrics (such as energy consumption in kWh or ccf) by pre-defined segments.

## Detail

The screen shot below shows and example of the Segment Distribution output. Users select both the Segment of interest as well as the Metric of consumption they wish to view across segments. Usage data is shown for the time period selected, which can be modified per the Date Selection toolbar. Both segments and metric can vary from client to client, and are typically configurable. In the image below, we are seeing the average daily kWh by vintage (year built).




Results are shown in descending order of magnitude, and the bars are topped by the value of the metric selected. There is a limit to the number of bars displayed, so in some cases only the highest values will be shown.

# Chapter 13

# Contract Compliance

Contract Compliance, or AMR/AMI Performance Review, is a Utility client-specific set of reports. These reports can provide both high-level summaries and as well as detailed information about the performance of the AMR/AMI network. Contract Compliance reports reflect the unique contractual requirements for performance at each Utility client. Oracle Utilities custom-builds reports to measure the AMR/AMI network performance.

Client-specific pages describe these requirements in detail, where reports have been built.

## Considerations

At a basic level, contract compliance determines whether the network's performance has met or not met the agreed upon (contractual) expectations. This is usually expressed as a percentage of delivered versus expected number of reads. Within this general framework, however, the Utility may choose to exclude certain meters from consideration (the denominator) due to meter issues the Utility takes responsibility for. The Utility may also exclude reads it receives but determines Ineligible because of known issues with the meter--the reads, though present, are unreliable--affecting the numerator. Oracle Utilities works closely with the Utility client to reflect both the requirements of the contract as well as business considerations.

## Benefits

Most AMR/AMI network vendors offer some sort of performance reporting. Oracle Utilities Analytics Cloud Service relies on the same source data to provide a 3rd party independent validation for the network's performance. Oracle Utilities Analytics Cloud Service reports also have the added benefit of being fully transparent--Utilities are able to see exactly which meter reads are "counted" and which are not.

# Chapter 14

# List Reports

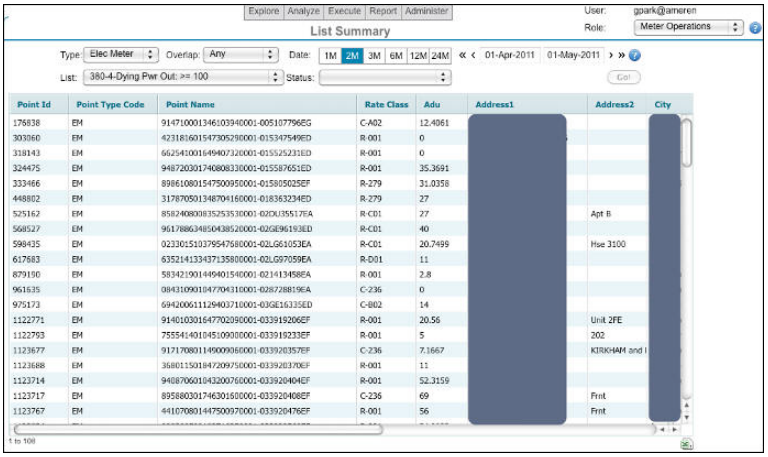
The List menu includes 5 screens that allow users to look at Test results (lists of meters) in various contexts.

All screens contain the following basic components:

- ROLE - Users must select the relevant 'Role' in order to see the tests (which produces Lists of Meters) that are stored in that role. Most lists are stored under 'Meter Operations' or 'Revenue Protection' roles
- TYPE - Where applicable, select from various commodities--Electric, Gas or Water meters
- OVERLAP - Similar to the advanced search options on the  Data Explorer screens, users can choose their list of meters based on the frequency with which they show up on Oracle Utilities Analytics Cloud Service tests' Any' - meters that have shown up in test results at least once within the time period specified will be displayed below
    - 'All' - meters that are in the test results every day within the time period specified
    - '2 or more', '3 or more', '4 or more...' - meters that show up at least the chosen number of times
    - 'Only 1' - meters that show up only once in the time period specified
    - 'New' - meters that are new to the test results in the time period specified (see Data Explorer page for qualifications/caveats)
- DATE - Similar to the Date Selection options of the Data Explorer screens, users can use the Quick Select Bar and Date Selectors to adjust the timeframe for which they would like to see test results
- LIST - Select the Calc name for which you would like to see Lists of meters (test results). Only tests stored under the role will be available to choose from
- STATUS - Based on the 'Role' selected, and if Role-specific Statuses have been configured, you can further filter the lists of meters to show only meters that have been tagged
- GO! - Click the 'Go!' button to prompt the search

# List Summary

The List Summary screen provides the most basic summary-level view of test results.




| Account | Util Location | Account Name | Postal Code | State | City | Address 2 | Address 1 | ADU | Rate Class | Point Name | Point Type Code | Point ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (Where available) | Inside | Sam Sunshine | 94618 | California | Surferville | Apt 107 | 1234 Avocado Street | 1.731 | R-001 | 643381489000l-EVO760750 | EM | 30360 |
| | Location as stored by Utility (e.g. Inside/Outside) | | | | | | | Average Daily Usage Of most recent month-to-date | | Utility ID | EM - Electric Meter GM - Gas Meter | System-generated Unique identifier |
| | | | | | | | | | | | | (Example) |

# List Daily Usage

The List daily Usage screen provides the daily consumption or usage value for each meter for each day it is on the list.

| | Point ID | Point Name | Metric | Date | Value | Value Tag |
|---|---|---|---|---|---|---|
| (Example) | 290444 | 007736242 0001-ENXZ406317 | Daily kWh | 01-April-11 | 32 | CSM |
| (Definition) | System-generated Unique identifier | Utility ID | kWh, ccf, or cf | | | Descriptive value tag |

# List Daily Metric

The List Daily Metric screen shows the same types of data as the List Daily Usage screen but allows you to choose the metric desired. Common options include 'Daily Peak' and 'Daily Usage Factor.' The options available here mirror those options available on the Data Explorer Screens in the Advanced Search section .

# List Interval Metric

The List Interval Metric screen shows the same types of data as the List Daily Usage and Metric screens. Common Metric options include:

- 15 Min Amps
- 15 Min kVa
- 15 Min kVaR
- 15 Min kVaRh
- 15 Min kW
- 15 Min Volts
- 15 Min kWh
- Estimate 15 min kWh
- Interval kVaRh
- Interval kWh

# List Aggregate Daily Usage

The List Aggregate Daily Usage screen summarizes the consumption of all meters on a given test on a single day.

| | List Name | Metric | Date | Sum Value | Avg Value | Cnt Value |
|---|---|---|---|---|---|---|
| (Example) | 300v1-No Con: High Priority (a) | Daily kWh | 07-Apr-11 | 524850.77428009 | 1223.42837827527 | 429 |
| (Definition) | Test Name | Metric of values provided | Date of Test | Sum of all meters on test for given day | Avg of all meters on test for given day | Count of all meters on test for given day |

# List Assessor Detail

Where available, the List Assessor Detail screen provides a summary-level view of assessor data for each meter listed.

| | Point Name | Property Owner | Use Code | Subdivision | Assessed Year | Sq Feet | Market Value | Year Built | Lot Size | Bedroom Cnt | Bath Count | Heat Cool | Heat Type | Cool Type | Story Count | Unit Count | Pool Type | Roof Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (example) | 8502 | 68836062900O1-EVZ208332 | Taj Ait-Laoussine | RSFR | CLEVELAND HEIGHTS | 2009 | 1154 | 202,220 | 1956 | 20038 | 3 | 1 | 3 3 | 3 | 3 | 1 | 1 | 24 |
| (definition) | System-Internal unique identifier | Utility ID | Per Tax-assessor records | | | | | | | | | | | | | | | |