

ORACLE

Oracle Energy and Water
Customer Edge
Conference

Meter Operations

Product Update and Roadmap

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Product Management

March 2023



Program agenda

1. San Diego Trivia
2. Our Mission / Meter Solution
3. Customer Updates
4. Release Strategy
5. Recent Releases
6. Roadmap
7. Analytics
8. Meter News
9. Open Discussion



San Diego Trivia

Questions

1. The first European to visit the region was explorer?

Juan Rodríguez Cabrillo

2. Sailing his flagship, *San Salvador*, from Navidad, New Spain (Mexico), Cabrillo claimed the San Diego bay for the Spanish Empire in 1542, 1624, or 1724?

1542

3. This is the largest aircraft carrier in the world that you can tour.

The USS Midway

4. The San Diego Zoo is one of the largest zoos in the world. San Diego Safari Park has the largest crash of what animal.

Rhinos



Our Mission

To provide the best meter solutions to address the world's energy and water challenges.



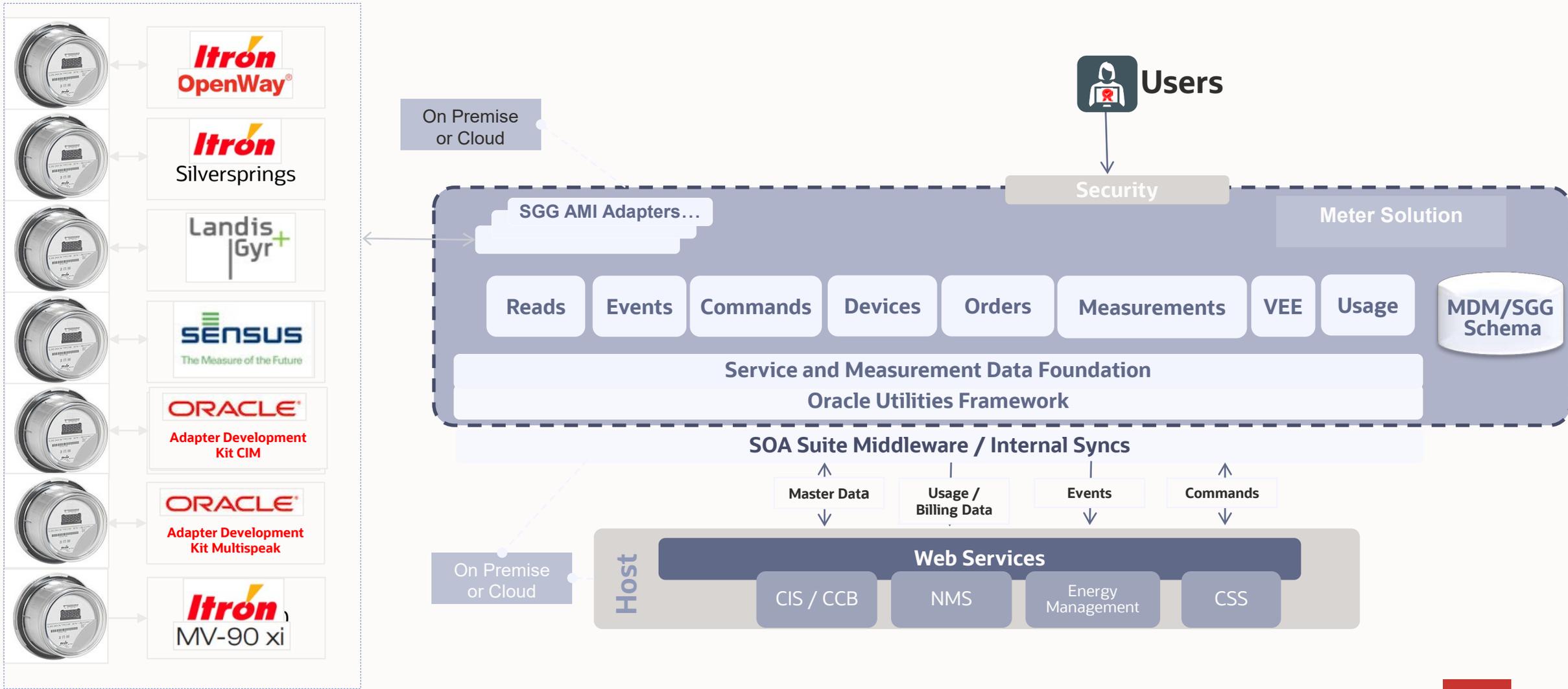
- 01** Device interfaces that scale to extreme volumes
- 02** Validate and cleanse data
- 03** Accurate Billing & Settlement per market rules
- 04** Analytics that leverage the AMI data
- 05** SaaS subscriptions and project accelerators to reduce project costs
- 06** In-depth training from Oracle University



Meter Solution



Meter Solution Overview



Meter Products and Services

On Premise

- **AMS – Advanced Meter Solution** (MDM, SGG, SOM, ODM in a single instance)
- **C2M – Customer to Meter**
- **MDM – Meter Data Management**
- **MSM – Markets Settlement Management**
- **ODM – Operational Device Management**
- **SGG – Smart Grid Gateway**
- **SOM – Service Order Management**

SaaS Cloud Offering

- **CCS – Customer Cloud Service**
- **CCS with AMS – Advanced Meter Solution** (CCB, MDM, SGG, SOM, ODM in a single instance)
- **MSCS – Meter Solution Cloud Service** (MDM/SGG/SOM/ODM)
- **MSMCS – Markets Settlement Management Cloud Service**

Customer Updates

—

Meter solution customer highlights

Oracle Energy and Water

Expansion in production

105M

meters in production

SaaS milestones

23

customers

Growing customer base

>90

live customers

Largest customer

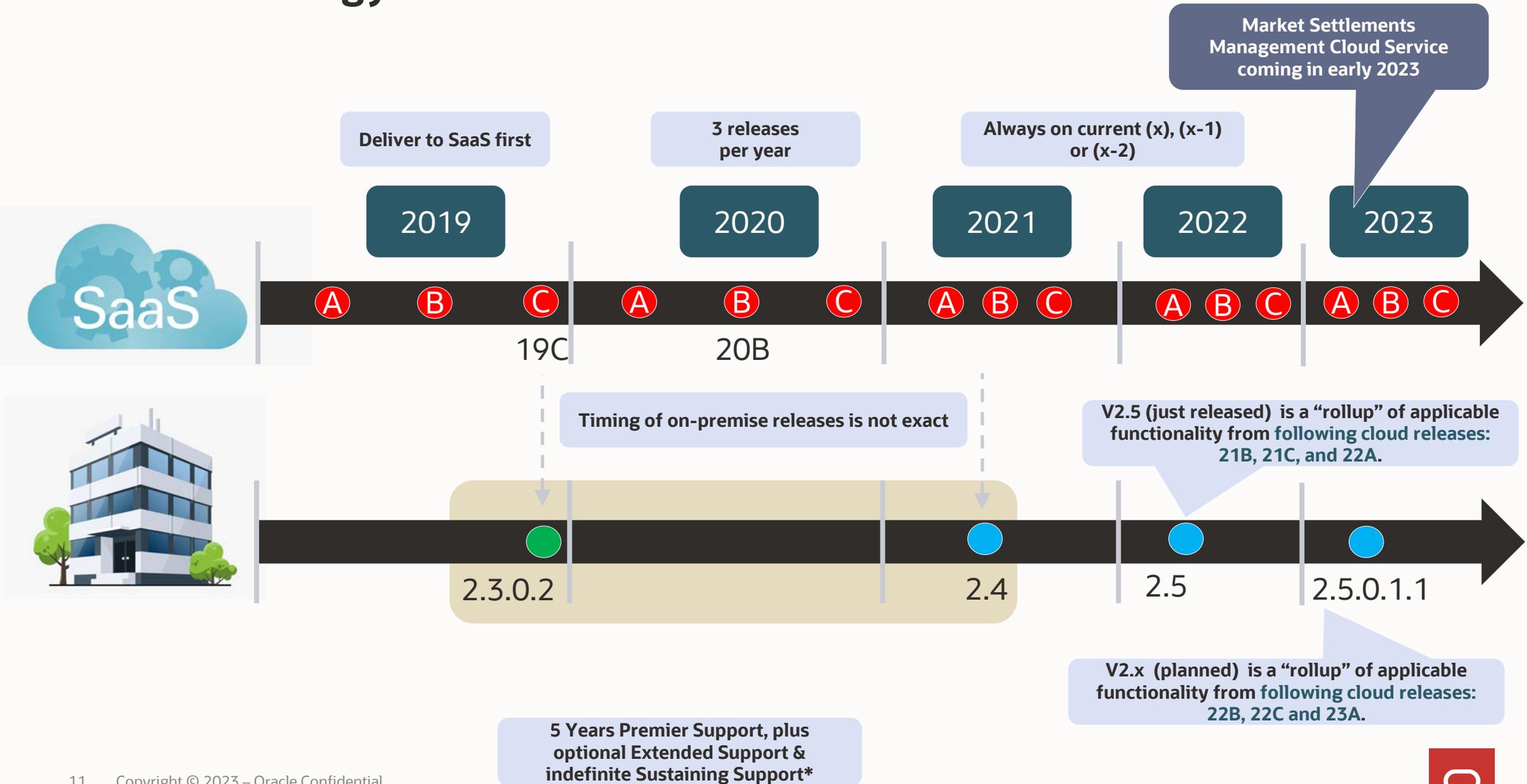
10.5M

meters

Release Strategy

—

Release Strategy: Software as a Service vs On-Premise

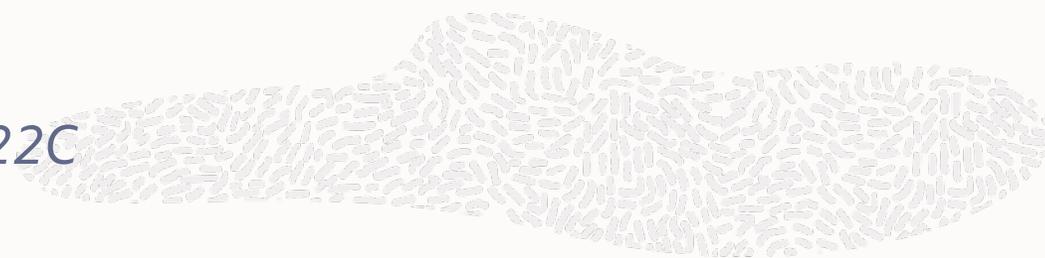


22B & 22C Recent Updates

—

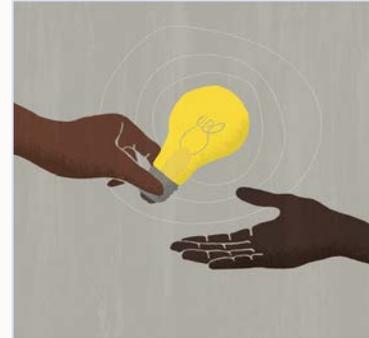
Customer Requests

Oracle Utilities Meter Solution Cloud Service 22B & 22C



Better Performance

- Initial measurement data
- Improved Measurement Extracts



Less Custom Integration

- AMI Adapters - UOM filtering for on-demand reads
- CCB to C2M/CCS Meter Conversion Work
- Generic CIM Adapter (with Adapter Development Kit)



Optimizing the User Experience

- Correcting Cross Installed Meters
- Dashboards by division code
- Measurement Reprocessing Improvements



Easier Implementations

- OUAV Meter - Usage by customer classifications improvements
- New Usage Rule to Calculate Demand for Individual Service Points





Initial Measurement Data Performance Improvements

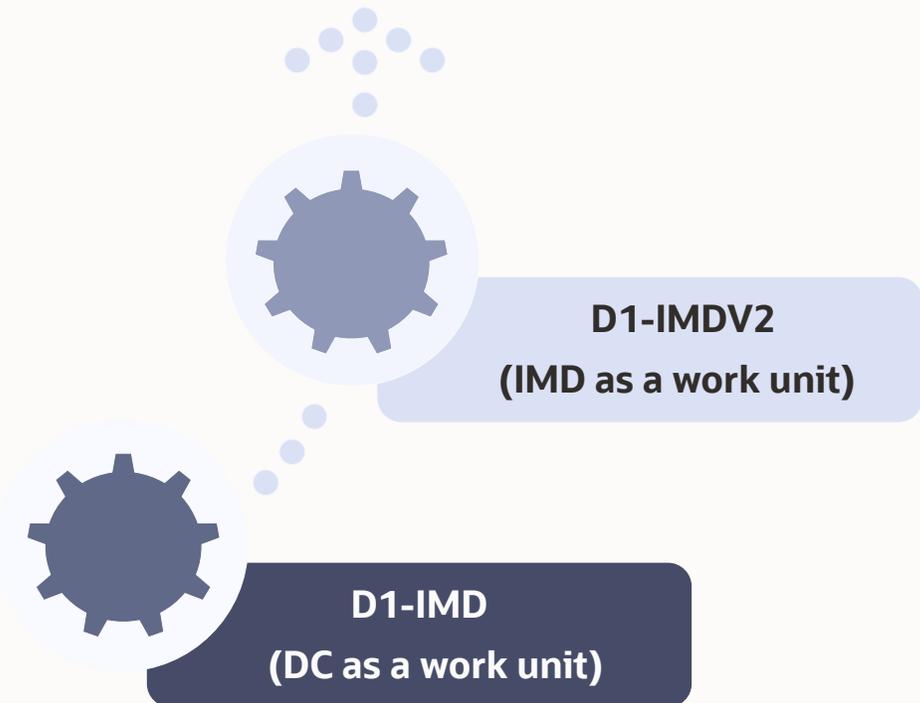
Better Performance

Features

- For customers that have a large volumes of historical readings arriving with the same DC (Device Configuration). This can cause performance and high volume of exception problems.
- Adding a **new batch job, D1-IMDV2**, that uses IMD as a processing work unit instead of DC to solve this problem.

Benefits

- Efficiently process a large number of IMDs for one DC without a reduction in throughput.
- Help customers with more frequent commits by -
 - Ensuring consistent records per second processing – faster processing
 - Isolating failures to a single IMD and not all IMDs for a DC - less exceptions





Managing Measurements Extracts

Making Measurement Extracts Easier

Benefits

- Extracting billions of reads is a difficult process and time consuming.
- A new “Override SQL Timeout” parameter is used to extend the default SQL timeout for longer running queries.
- Reduces project customizations.

Features

- New and updated extract batch processes
 - New *initial extracts* with time range filtering and override time out parameter
 - *Initial Measurement Data Header data (D1-SIMDI)*
 - *Measurement Extract (D1-SMDIE)*
 - Updated *current extracts* with override time out parameter
 - *Initial Measurement Data Header data (D1-SIMDC)*
 - *Measurement Extract (D1-SMDEC)*

SaaS Specialized Data Extracts

Initial Extracts

Date Filtering

Extended SQL Run Time

Current Data Extracts

Extended SQL Run Time





AMI Adapters - UOM Filtering For On-Demand Reads

Less Manual Work

Features

- Provide unit of measure filtering for on-demand reads data
- Support for following adapters
 - Landis+GYR
 - Itron Advanced Metering Manager (formerly SSN)
 - Sensus (was updated in last release)
 - ADK (Adapter Development Kit)

Benefits

- Preventing IMD (Initial Measurement Data) Seeder Errors for unwanted meter readings
- Reducing manual work





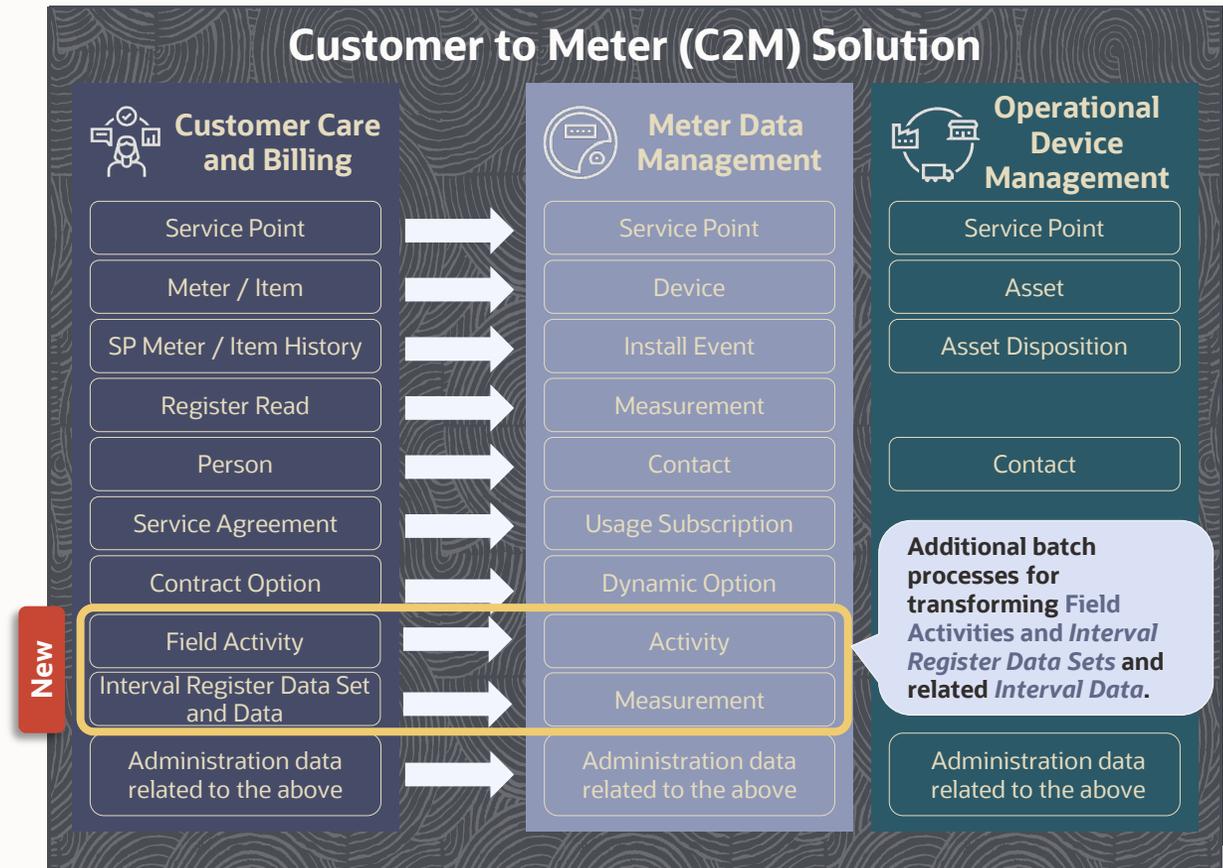
Simplify Data Migration Process to Customer to Meter (C2M) Solution

Makes the Transition to Customer Cloud Service Easier

Additional Batch Processes for Transforming CCB Data to C2M Formatted Data



- Use existing *Customer Care and Billing* data to create *Meter Data Management* and *Operational Device Management* data



Refer to the *Initial Master Data Conversion* and *Transactional Data Conversion* sections in the *Administrative User Guide* for further details.



CIM (Common information Model) AMI Adapter

Less Custom Integration

Features

- Generic CIM (IEC 61968-9, Edition 2.0) AMI Adapter included as part of the Adapter Development Kit
- In this release, only 'usage' and 'event' data upload will be supported.

Benefits

- Support for customers wishing to use the CIM standard
- Reduces project time and costs



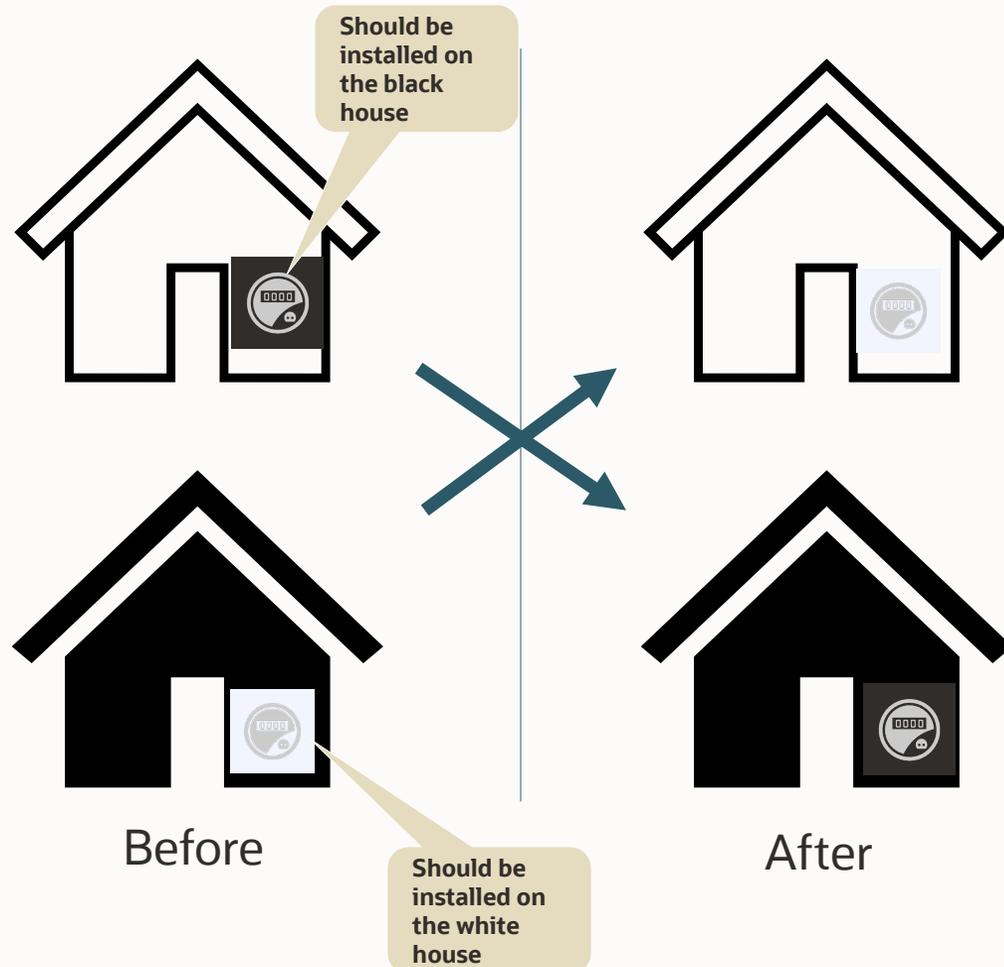
INTERNATIONAL STANDARD





Correcting Cross Installed Meters in CCS/C2M

Solving a Major Problem



Features

- Allow users to automatically correct cross installed meters
- Field Work Integration to determine if there are crossed meters
- The process corrects the MDM data
- Starts Off Cycle Bill Generation (OCBG) Process

Benefits

- Dramatically reduce manual work
- Reduce manual entry errors





Dashboards by Division Code

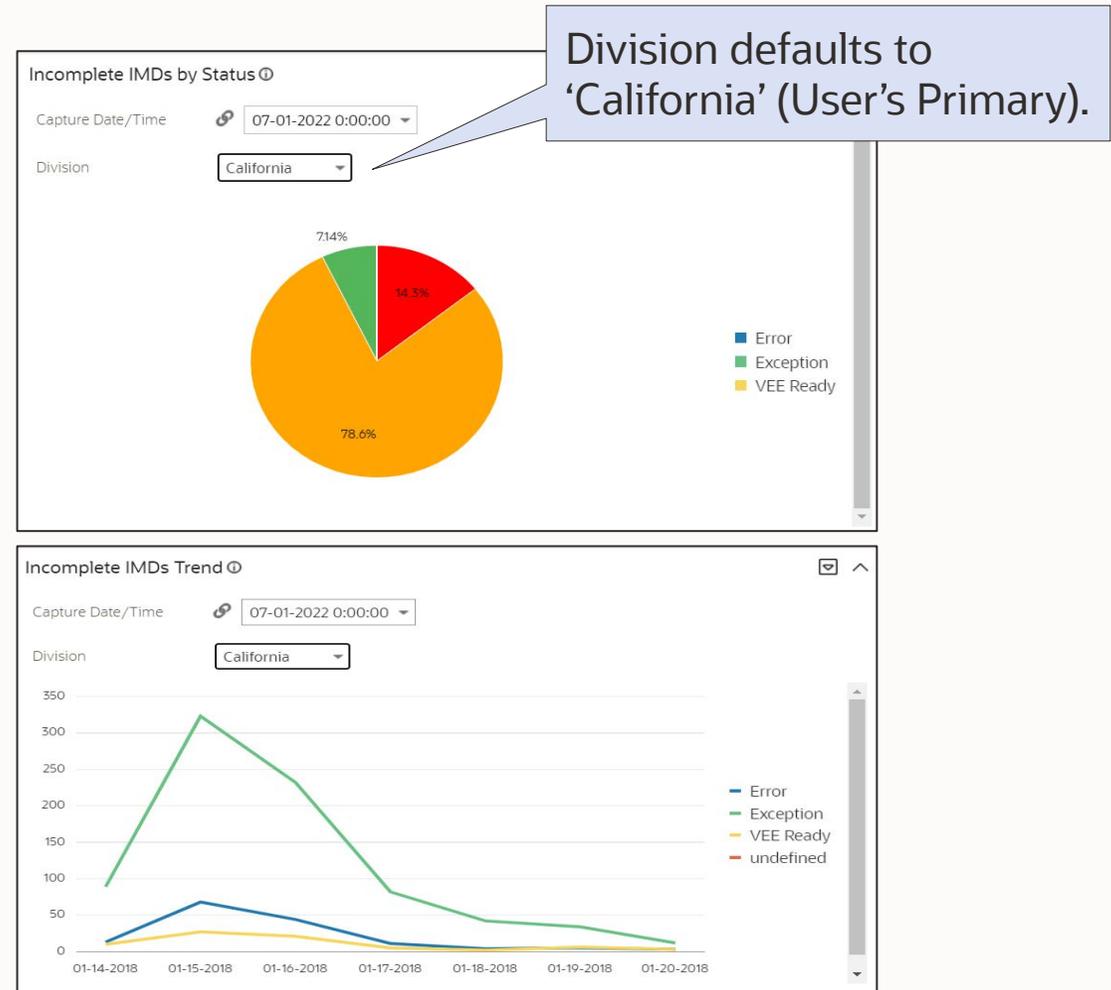
Support for Multi-Opco Companies

Features

- Enhance meter operational dashboards to allow filtering by division code supporting utilities that have multiple divisions.

Benefits

- Allow users to see data that applies to their division only.
- Supports multi-division companies.
- Reduces errors as it does not clutter the dashboard with data that is not applicable to users.





Measurement Reprocessing Improvements

Improved Meter Multiplier Correction

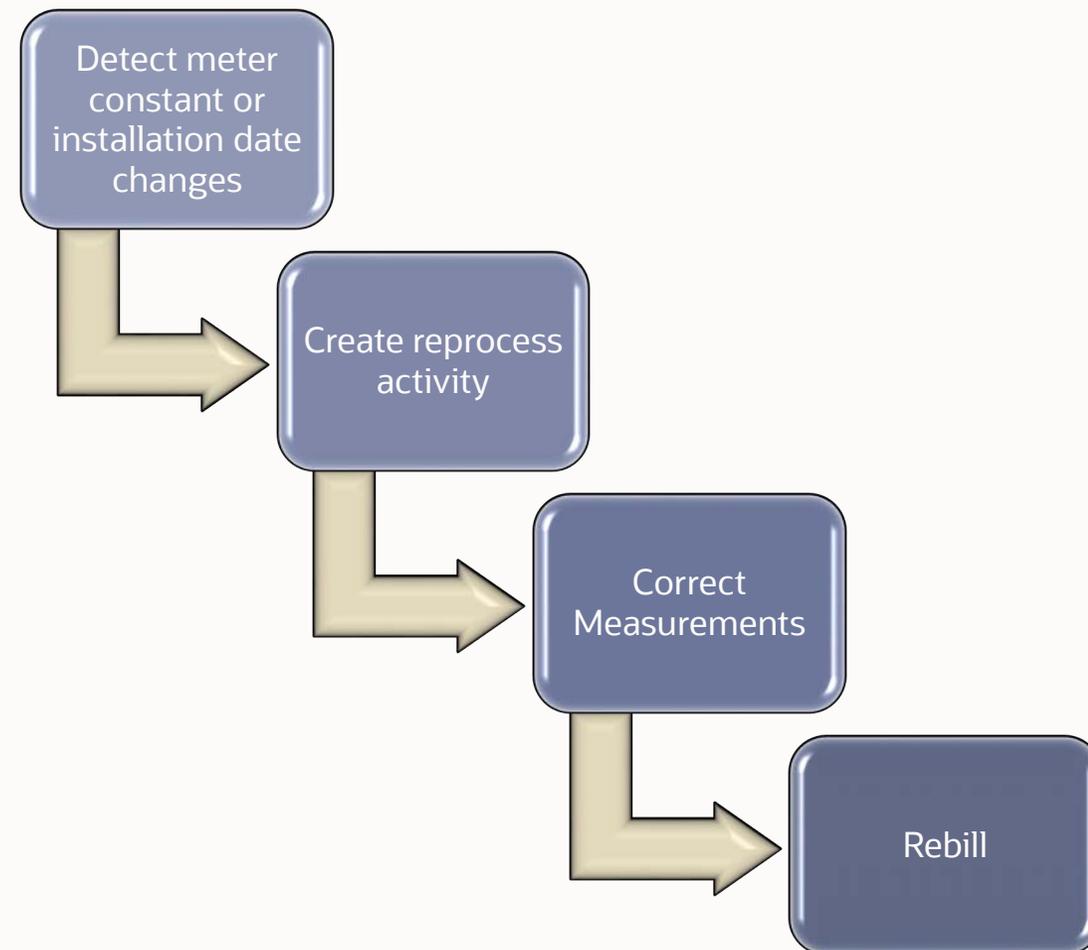
Benefits

- Greatly reduces manual work
- Process automation also increases customer satisfaction

Features

- Measurement reprocessing now initiated when specific changes are detected
 - When the installation and removal dates are expanded to cover a larger portion of time, we will look for existing measurements that require a change in multiplier.

Reprocessing Process





Usage by Customer Classifications Improvements

Making OUAV (Oracle Utilities Analytics & Visualizations) Easier

Features

- These visuals will now use the Usage Subscription (US) Type to define a customer profile class.
- The US Type is a natural profile descriptor and will work out of the box with no customizations.

Benefits

- There is no customization required for this enhancements.
- Ease to implement





Service Point Level Demand Usage Rule

Make Complex Billing Easier

Business Object

Main Schema Algorithms Lifecycle Summary

General Information

Business Object: D1-CoincidentPeakSPDemandRule
 Description: Coincident Peak and Individual SP Demand
 Owner: Service and Measurement Data Foundation

Business Object Hierarchy

Algorithm Bookmark

Main

Algorithm Code: D1-CALDEMAND

Description: Calculate Coincident Peak and Individual SP Demand

Algorithm Type: D1-CALDEMAND *Calculate Coincident Peak and Individual SP Demand*

Alg. Type Descr: This algorithm calculates the coincident peak demand and individual SP demand. When calculating coincident peak, each of the usage subscription service point's non-peak measurements is retrieved, with each curve is aligned to the common interval size and then combined to single curve which is used to identify the peak interval. The peak interval after converting to the target unit of measure, will be the period SQ. Coincident peak calculation can be configured to limit the peak interval to on-peak and off-peak schedules. Each service point that contributed to the coincident peak, will also have its demand SQ calculated for that period.

Parameter: 1 of 1

Effective Date: 01-01-1950

Parameter	Sequence	Value
Regular Bottom Range Condition	10	500000
Regular Top Range Condition	20	999999

Features

- Allows users to calculate demand at the service point (SP) level not only at the usage subscription level.
- Calculates demand (based on Interval Data) for:
 - Individual Service Points
 - Coincident Peaks
 - TOU (time of use) Coincident Peaks

Benefits

- Stores service point peak demand values to be used in bill presentment
- Reduce implementation costs

Refer to the **Usage Calculation Rules** section of the **Administrative User Guide** for further information.

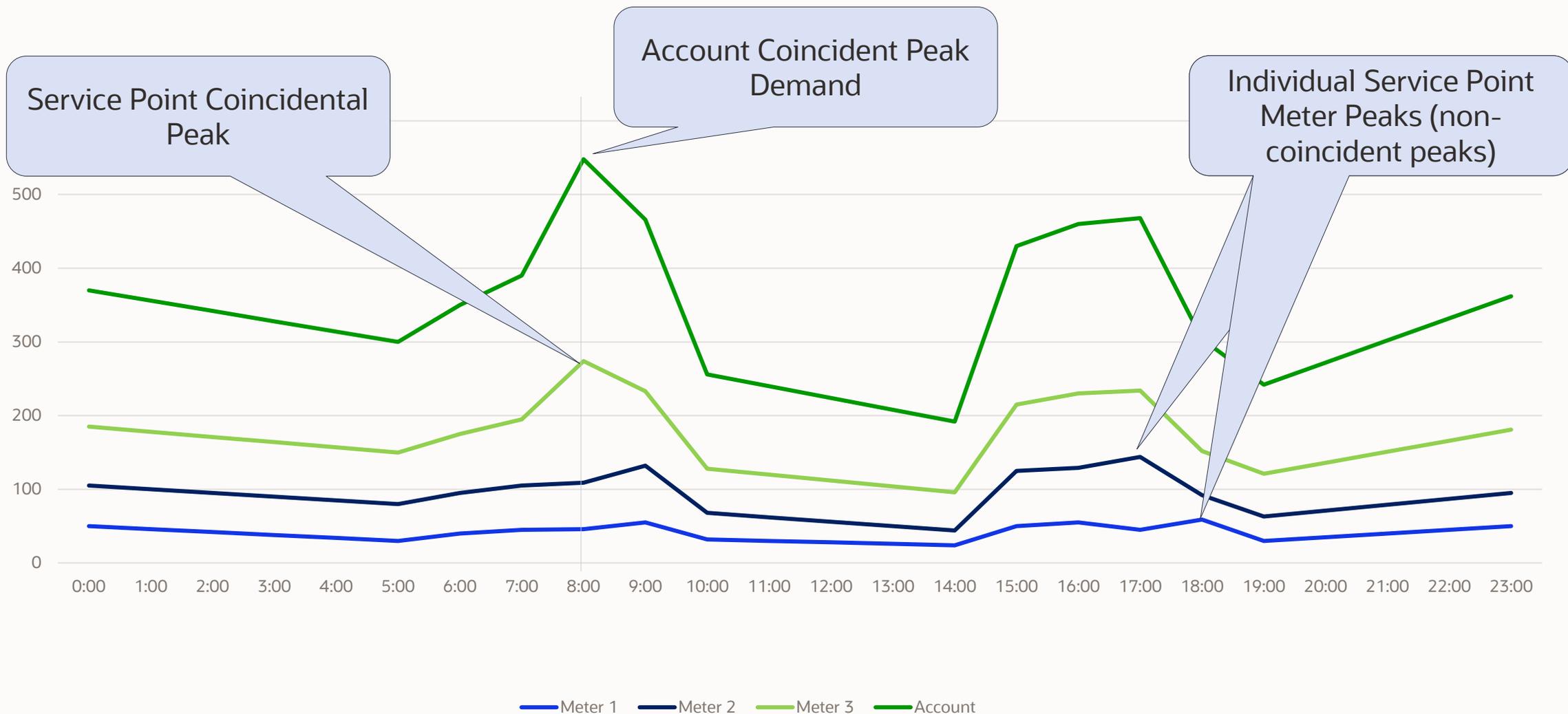
Plan to attend the **Complex Billing** session at 1 today.





Service Point Level Demand Usage Rule

Coincident Peak Demand

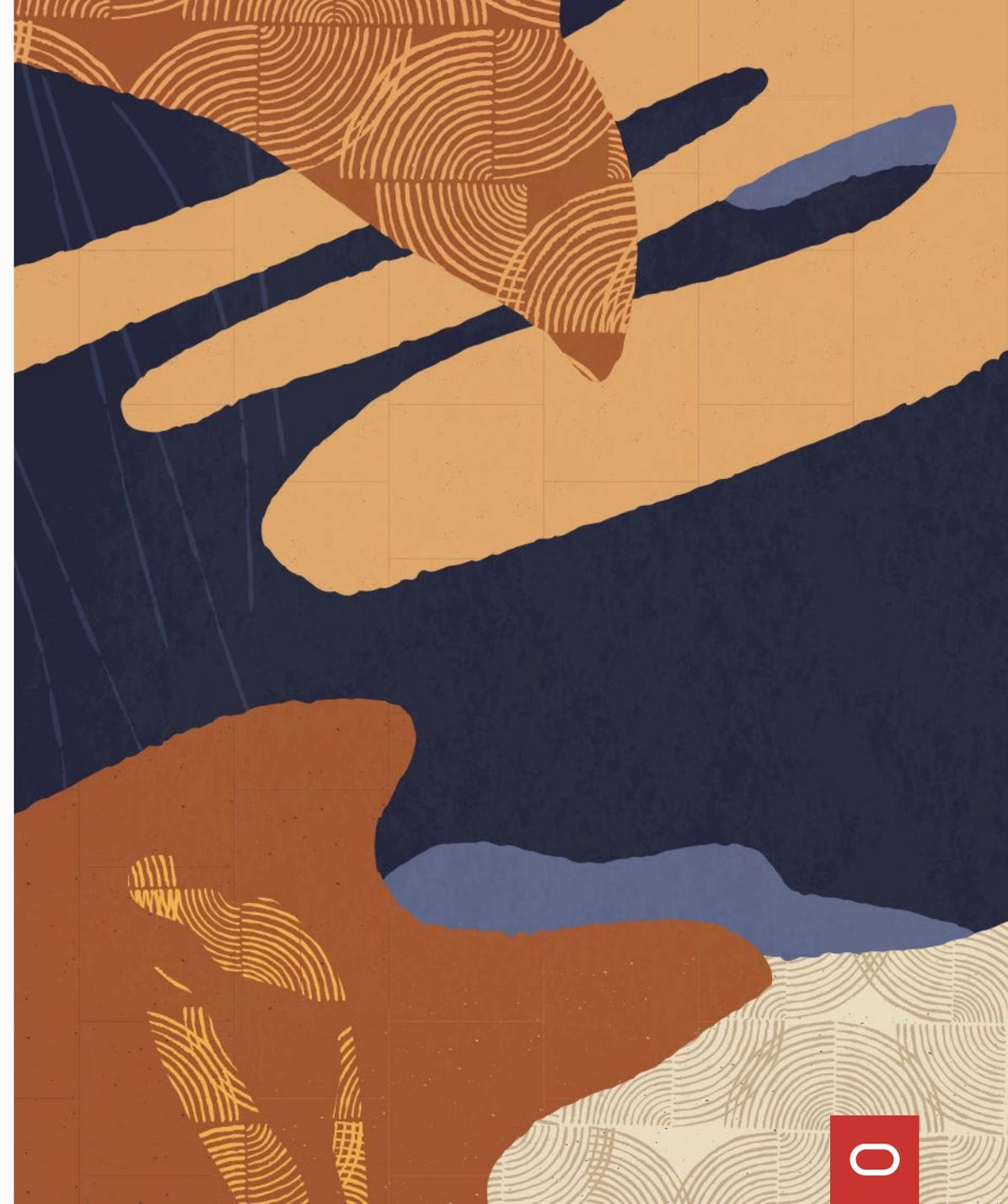


Implementation Advice

Demand Calculation Rule

Please go to Oracle Help Center to see a demonstration video on this enhancement.

[Oracle Utilities Meter Solution Cloud Service - Videos](#)



Summary of Implementation Steps

Usage Subscription Configuration – Add the Service Points

Usage Subscription: Boettler,Bill / Home Phone 415-402-7655

Search Bookmark Refre

Main Log

Effective Date Rate

Measuring Components ⓘ

Relationship Type Measuring Component

Service Points ⓘ

Service Point	Start Date/Time	Override Start Date/Time	Stop Date/Time	Override Stop Date/Time	Usage	Use Percent
1600 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) / Monthly - Day 1, Route 1 / Active ⓘ	09-01-2011 00:00:00 EDT				Add	100
1601 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) / Monthly - Day 1, Route 1 / Active ⓘ	01-01-2022 00:00:00 EST				Add	100

Dynamic Options ⓘ

Add the Service Points in Usage Subscription.



Summary of Implementation Steps

Extendable Lookup Configuration – Link Up the Usage Calculation Group

Link Up the Usage Calculation Group in 'Customer Rate Schedule' extendable lookup value list

The screenshot displays the 'Extendable Lookup Value' configuration page. On the left, the 'Main' section shows details for the lookup value: Rate is 'E-TOU', Status is 'Active', and Description is 'Electric time of use'. Below this, the 'Default Usage Calculation Group' is set to 'Electric - Time of Use'. On the right, the 'Record Actions' section includes 'Edit', 'Delete', and 'Duplicate' buttons. The 'Record Information' section shows the Business Object is 'Customer Rate Schedule' and the Owner is 'Customer Modification'. The 'Override' table lists two entries:

Device Configuration Type	Calculation Group
Electric Auto Read - kWh - 60 min intervals	Electric - TOU (on/off/sh) & Demand with register reads
Electric Auto Read - kWh - TOU - 60 min intervals	Electric-Commercial-Individual SP Peak Demand



Summary of Implementation Steps

Source UOM & Target UOM Configuration

Unit Of Measure

Main

Unit of Measure List

Unit of Measure

Main

Unit of Measure	KWH
Description	Kilowatt-Hours
Shorthand Description	kWh
Service Type	Electric
Decimal Positions	5
Allowed on Measuring Component	Yes
Measures Peak Quantity	No
Magnitude	1
Base Unit Of Measure	Watt

Record Actions

Edit Delete Duplicate

Record Information

Business Object Unit Of Measure

Unit Of Measure

Main

Unit of Measure List

Unit of Measure

Main

Unit of Measure	KW
Description	Kilowatt
Shorthand Description	kW
Service Type	Electric
Decimal Positions	5
Allowed on Measuring Component	Yes
Measures Peak Quantity	Yes
Magnitude	1
Base Unit Of Measure	Watt

Record Actions

Edit Delete Duplicate

Record Information

Business Object Unit Of Measure

Be sure to configure the “Base Unit of Measure” field for both UOMs. The value must be same as demand unit (for example, Watt) for both (source & target) UOMs.



New Usage Rule to Calculate Demand

Individual SP Demand Configuration

The image shows a screenshot of the Oracle Usage Calculation Rule configuration interface. It is divided into two main sections: 'Usage Calculation Rule' and 'Calculation Details'.

Usage Calculation Rule (Left Panel):

- Main:** Target UOM/TOU/SQI for resulting curve (Callout)
- Usage Calculation Rule:**
 - Calculation Group: COINCIDENT PEAK CALCULATION GROUP
 - Calculation Rule: COINCIDENT PEAK RULE
 - Sequence: 10
 - Description: Coincident Peak Calculation Rule
 - Detailed Description:
 - Calculation Rule Category: Usage Calculation
- Interval Data Retrieval Parameters:**
 - UOM: Kilowatt-Hours (Callout: Source UOM/TOU/SQI : Identifier of the SP Interval data)
 - TOU:
 - SQI:
 - Check Missing Intervals: Yes
 - No Meter Condition ⓘ: No Read - System
 - SP Device Filter ⓘ:

Calculation Details (Right Panel):

- Calculation Details ⓘ:** Calculate Function: Individual SP Demand (Callout: Advisable to configure an SQI for uniqueness)
- Results ⓘ:**
 - UOM: Kilowatt
 - TOU:
 - SQI: Maximum
 - Common Interval Size: 01:00:00 (Callout: Interval size must be specified to get the SP curves to a common size)
 - Resulting Curve Option: Save and Export
 - Perform Measurement Quality Assessment: Yes
 - SQ Highlights Option: Extract



New Usage Rule to Calculate Demand

Usage Transaction for Individual SP Demand

Usage Transaction: **Usage Transaction details for individual SP demand** 0:00 EDT / COINCIDENT PE... Add Search Bookmark

Main Log

Usage Period ⓘ

Period 08-07-2022 00:00:00 EDT-08-15-2022 00:00:00 EDT
Usage Type Frequently Read
Service Quantities

UOM	TOU	SQI	Quantity	Data Quality Assessment	SQ Type	Service Point	Measuring Component	TOU Map	Factor	Characteristic Type	Characteristic Value	Calculation Group
Kilowatt		Maximum	198.000000	Quantity Based on Regular Data Only	Other	1600 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) / Monthly - Day 1, Route 1 / Active	2203430 / Electric kWh 60min					COINCIDENT PEAK CALCULATION GROUP
Kilowatt		Maximum	72.000000	Quantity Based on Regular Data Only	Other	1601 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) / Monthly - Day 1, Route 1 / Active	0343022 / Electric kWh 60min					COINCIDENT PEAK CALCULATION GROUP

SQ Highlight Date/Time List

SQ Highlight Date/Time

```
<highlightDateTimesList>
<highlightDateTime>2022-08-10-17.00.00</highlightDateTime> <highlightType>MAXIMUM</highlightType> <highlightCondition>5
```

SQ Highlight Date/Time

```
<highlightDateTimesList>
<highlightDateTime>2022-08-08-01.00.00</highlightDateTime> <highlightType>MAXIMUM</highlightType> <highlightCondition>5
```



New Usage Rule to Calculate Demand

Coincident Peak Configuration

Usage Calculation Rule

Main

Usage Calculation Rule

Main

Calculation Group	COINCIDENT PEAK CALCULATION GROUP
Calculation Rule	COINCIDENT PEAK RULE
Sequence	10
Description	Coincident Peak Calculation Rule
Detailed Description	
Calculation Rule Category	Usage Calculation

Interval Data Retrieval Parameters

UOM	Kilowatt-Hours
TOU	
SQI	
Check Missing Intervals	Yes
No Meter Condition ⓘ	No Read - System
SP Device Filter ⓘ	

Calculation Details ⓘ

Calculate Function	Coincident Peak
--------------------	-----------------

Results ⓘ

UOM	Kilowatt
TOU	
SQI	Coincident
Common Interval Size	01:00:00
Resulting Curve Option	Save and Export
Perform Measurement	Yes
Quality Assessment	
SQ Highlights Option	Extract



New Usage Rule to Calculate Demand

Usage Transaction for Coincident Peak

Usage Transaction: 08-09-2022 00:00:00 EDT-08-12-2022 00:00:00 EDT | Add | Search | Bookmark

Main | Log

Period: 08-09-2022 00:00:00 EDT-08-12-2022 00:00:00 EDT
 Usage Type: Frequently Read
 Service Quantities

UOM	TOU	SQI	Quantity	Data Quality Assessment	SQ Type	Service Point	Measuring Component	TOU Map	Factor	Characteristic Type	Characteristic Value	Calculation Group	Calc
Kilowatt		Coincident	234.400000	Quantity Based on Regular Data Only	Other							COINCIDENT PEAK CALCULATION GROUP	COIN PEAK
Kilowatt			194.400000	Quantity Based on Regular Data Only	Other	1600 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) / Monthly - Day 1, Route 1 / Active	2203430 / Electric kWh 60min					COINCIDENT PEAK CALCULATION GROUP	COIN PEAK
Kilowatt			40.000000	Quantity Based on Regular Data Only	Other	1601 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) /	0343022 / Electric kWh 60min					COINCIDENT PEAK CALCULATION GROUP	COIN PEAK

SQ Highlight Date/Time List

SQ Highlight Date/Time

<highlightDateTimesList>
 <highlightDateTime>2022-08-10-18.00.00</highlightDateTime> <highlightType>CONCPEAK</highlightType> <highlightCondition>501000</highlightCondition>

SQ Highlight Date/Time ^

SQ Highlight Date/Time ^



New Usage Rule to Calculate Demand

Coincident On-Peak Configuration

Usage Calculation Rule	
Main	
Usage Calculation Rule	
Main	
Calculation Group	COINCIDENT PEAK CALCULATION GROUP
Calculation Rule	COINCIDENT PEAK RULE
Sequence	10
Description	Coincident Peak Calculation Rule
Detailed Description	
Calculation Rule Category	Usage Calculation
Interval Data Retrieval Parameters	
UOM	Kilowatt-Hours
TOU	
SQI	
Check Missing Intervals	Yes
No Meter Condition ⓘ	No Read - System
SP Device Filter ⓘ	

Calculation Details ⓘ	
Calculate Function	Coincident On Peak
On Peak Off Peak Schedule	Summer ToU Map Template
Results ⓘ	
UOM	Kilowatt
TOU	On-Peak
SQI	Coincident
Common Interval Size	01:00:00
Resulting Curve Option	Save and Export
Perform Measurement Quality Assessment	Yes
SQ Highlights Option	Extract

TOU (ON/OFF) schedule is required

TOU Map template schedule will be used

Set TOU to indicate 'ON' Schedule

Set SQI to indicate Coincident Peak Demand



New Usage Rule to Calculate Demand

Usage Transaction for Coincident On-Peak

Usage Transaction: / COINCIDENT PE... Add Search Bookmark R

Main Log

Period 08-12-2022 00:00:00 EDT-08-16-2022 00:00:00 EDT
 Usage Type Frequently Read
 Service Quantities

UOM	TOU	SQI	Quantity	Data Quality Assessment	SQ Type	Service Point	Measuring Component	TOU Map	Factor	Characteristic Type	Characteristic Value	Calculation Group	Calcul
Kilowatt	On-Peak	Coincident	227.000000	Quantity Based on Regular Data Only	Other							COINCIDENT PEAK CALCULATION GROUP	COINC PEAK
Kilowatt	On-Peak		198.000000	Quantity Based on Regular Data Only	Other	1600 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) / Monthly - Day 1, Route 1 / Active	2203430 / Electric kWh 60min					COINCIDENT PEAK CALCULATION GROUP	COINC PEAK
Kilowatt	On-Peak		29.000000	Quantity Based on Regular Data Only	Other	1601 Gulf Street NW, Uniontown, OH, 44685, USA / Electric Residential (OPAL) /	0343022 / Electric kWh 60min					COINCIDENT PEAK CALCULATION GROUP	COINC PEAK

Usage Transaction details for Coincident On-Peak

SQ Highlight Date/Time List

SQ Highlight Date/Time

```
<highlightDateTimesList>
  <highlightDateTime>2022-08-14-17.00.00</highlightDateTime> <highlightType>COPEAKON</highlightType> <highlightCondition>501000

```

SQ Highlight Date/Time ^

SQ Highlight Date/Time ^



Roadmap



Roadmap Themes



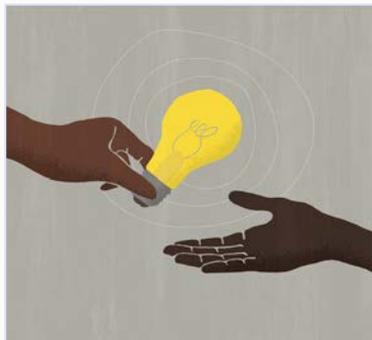
Operational Efficiencies

- Usage Rule to Calculate Rolling Demand



Better Performance

- Meter Health Checks



Less Custom Integration

- Generic CIM Adapter for Commands
- DataConnect Enhancements



Improved Core Capabilities

- Remove unwanted IMDs
- Research on the Next Generation MDM





Usage Rule to Calculate Rolling Demand

Easier Complex Billing

15-minute kWh interval data converted to rolling 30-minute kW example

Time	0:15	0:30	0:45	1:00	1:15	1:30	1:45	2:00
15 min kWh value	5	6	7	3	5	1	3	8
Rolling 30 kWh	0*	11	13	10	8	6	4	11
kW	0	22	26	20	16	12	8	22

Features

- Support meters that record intervals at one interval length and tariffs that require demand be calculated at a higher interval length.
- Adding a new usage rule, for deriving rolling demand values.

Benefits

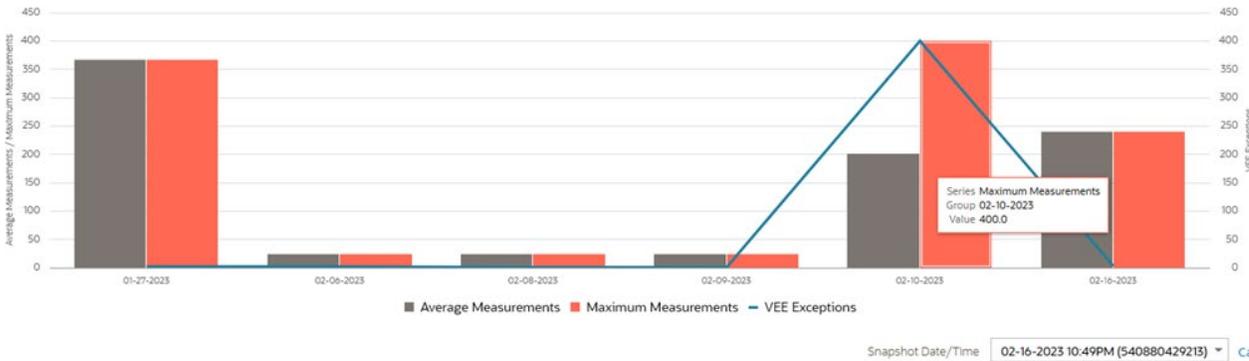
- Support utilities to bill their customers with rolling demand in a standardized way.
- Provide customer's bill demand across various interval lengths.





Meter Health Checks

Self Service Tools to Identify Issues



IMD Quality Detail

No Filters Defined

	Date Time	Business Object	Interval /Scalar	Exception Type	Description	VEE Exceptions	Average Measurements	Maximum Measurements	Total Measurements
1	2022-11-18	D1-ManualIMDScalar	D1SC	ZZDCH-INSUFF	Insufficient Input Data	8	111	265	961
2	2023-01-24	D1-ManualIMDScalar	D1SC	ZZDCH-INSUFF	Insufficient Input Data	7	60	335	701
3	2023-01-27	D1-ManualIMDScalar	D1SC	ZZDCH-INSUFF	Insufficient Input Data	2	367	367	367
4	2023-02-06	D1-ManualIMDScalar	D1SC	ZZDCH-INSUFF	Insufficient Input Data	2	24	24	48
5	2023-02-08	D1-ManualIMDInterval	DIIN	TEST	Test	1	24	24	24
6	2023-02-09	D1-ManualIMDInterval	DIIN	TEST	Test	1	24	24	24
7	2023-02-10	D1-EstimationIMDScalar	D1SC	RT_VEE_PROCS	Insuf Data Exception for Vee group Factor	400	201	400	80200

Very large number of exceptions

Features

- Allow users to access different dimensions of Meter Data.
- Allow users to check the health of their system such as, Count of –
 - IMDs in Pending, Error etc.
 - IMDs with VEE Exceptions
- Export/print results to Excel and printing formatted results

Benefits

- Provide customers self-service tools.
- Allow customers to begin verifying the health of their system.
- Support data trends analysis.





CIM AMI Adapter

Less Custom Integration

Features

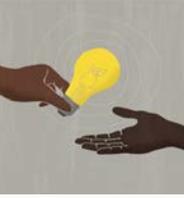
- Expand the use of CIM. Add a generic CIM (IEC 61968-9, Edition 2.0) AMI Adapter as part of the Adapter Development Kit.
- Add On-demand read command

Benefits

- Support for customers wishing to use the CIM standard
- Reduces project time and costs
- Provides a framework for other commands



INTERNATIONAL STANDARD



DataConnect Enhancements

Extract Additional Energy Management Data



Features

- Support enhanced Opower extracts via DataConnect.
- Allow users to extract additional information with the “Interval AMI” extract
 - Service Quantity Identifier
 - Time Of Use
 - Service Type
 - Device Id (meter number)

Benefits

- Interval data extract into Opower or other Energy Management System
- Customer satisfaction



Remove Unwanted IMDs

Improved Self Service Tools



Features

- Sometimes meter reads are added accidentally
- This feature allows users to identify and remove unwanted IMDs that have not been finalized
- Filter Options include - Date range, BO, BO Status, Device configuration

Benefits

- Provides quicker cleanup
- Reduces manual work



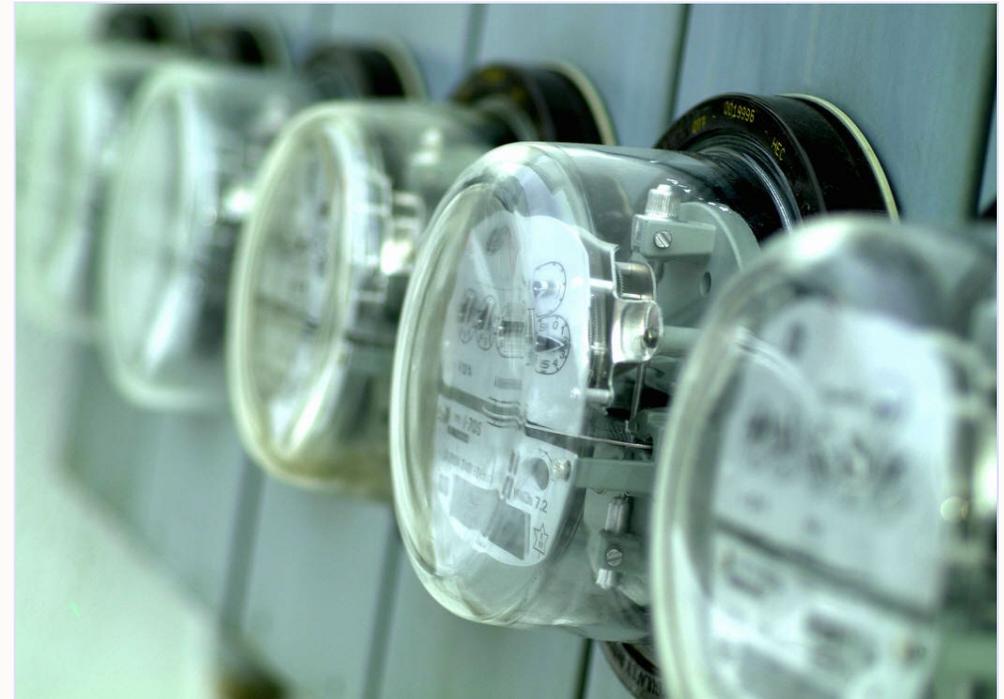


Perform Research on the *Next Generation MDM*

Evaluate tools and methods to help make MDM faster, cheaper and better (pardon the cliché)

Research areas may include:

- **Faster**
 - Analyze meter data using advanced tools to optimize performance
 - Make data available sooner
- **Cheaper**
 - Evaluate storage options for non-billing measurements
 - Reduce customer exceptions and work
- **Same Accuracy or Better**
 - Evaluate read validation accuracy



Analytics



Our mission is to help people see
data in new ways, discover insights,
unlock endless possibilities.



The Growth of Analytics and technology to support it

Oracle Energy and Water

Data Tsunami

90%

Of Data is Unstructured

Cloud Infrastructure

75%

Will use this to advance AI initiatives

Disparate Sources

3

Sources required to uncover insights

OCI Capabilities

10B

Queries per hour



Enterprise Analytics built on OCI Technology

Cloud Analytics for On-Prem Customers

- **Ready to Go**
Data warehouse kept in sync with your operational data store using change data capture technologies
- **Ready to Work**
Hundreds of pre-built visualizations, dashboards and subject areas focused on key areas of your business
- **Ready to Build**
Self-service, customizable, and Extendable.



Customer Subject Areas

Customer-Related Subject Areas and Sample Data Visualization Projects

24 Subject Areas
100+ Metrics/Calculations
20 Dashboards having 240+ Visualization

Customer Interactions

- Customer Contacts
- Case and Case Logs
- SA Arrears

Credit & Collections

- Write Off Processing

Exceptions

- To Do Entries

Financials & Billing

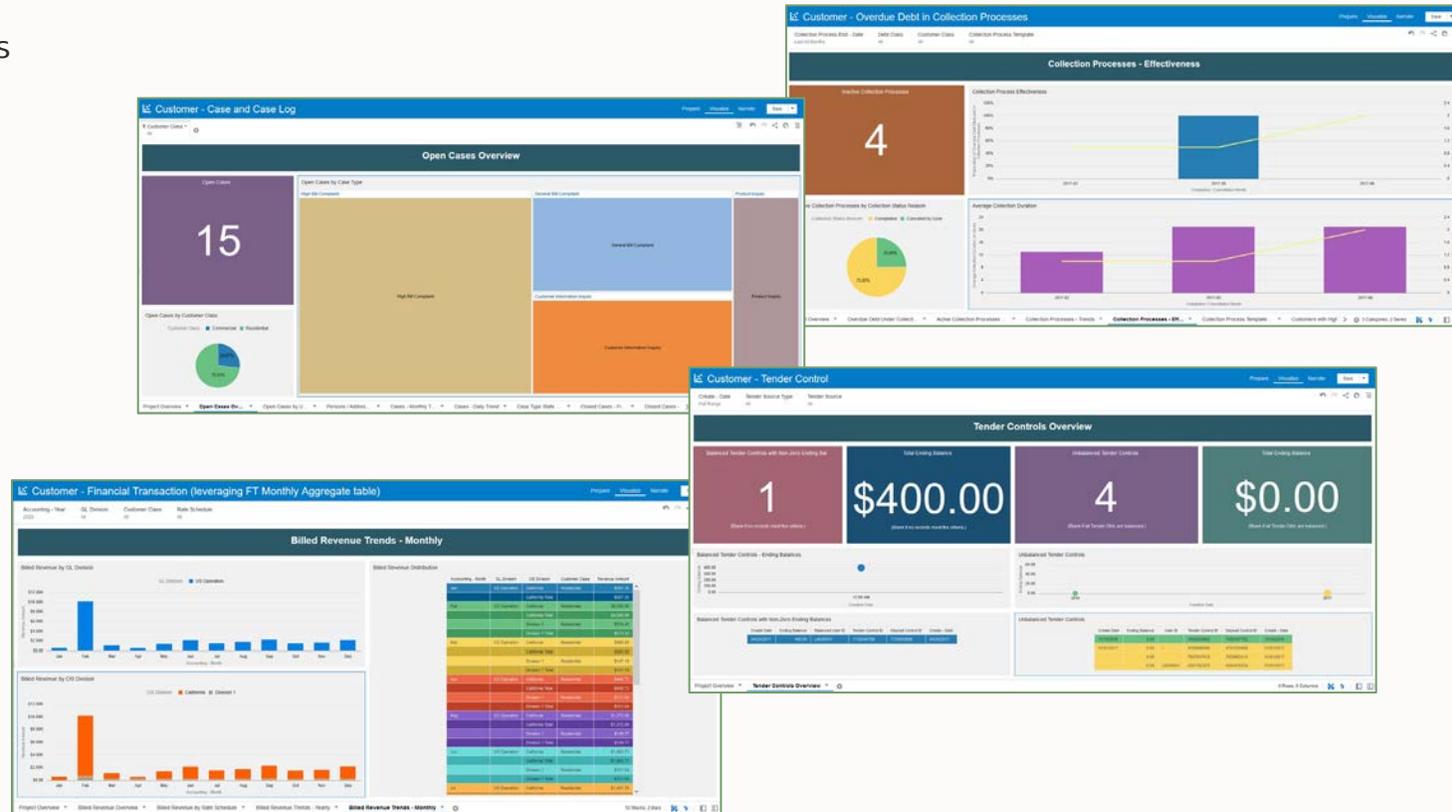
- Billed Usage & Billing Overview
- Financial Transactions
- FT GL Details

Financial Controls

- Tender Controls
- Deposit Controls
- Overdue Debt in Collection Processes
- Overdue Debt in Severance Processes

Payments and Adjustments

- Payment
- Tenders
- Adjustments



Meter Subject Areas

Meter-Related Subject Areas and Sample Data Visualization Projects

16 Subject Areas

100+ Metrics/Calculations

16 Dashboards having 240+ Visualization

Device Commands

- AMI Bandwidth Issues
- Average Completion Time by Head End
- Identification of pending commands and possible network issues.

Service Orders

- Open orders by type
- Average time to complete order.
- Identification of problem orders
- Discover areas with open orders.

Master Data Counts

- Disconnected meter stats
- Service points connection status
- Connected devices.

Field Works

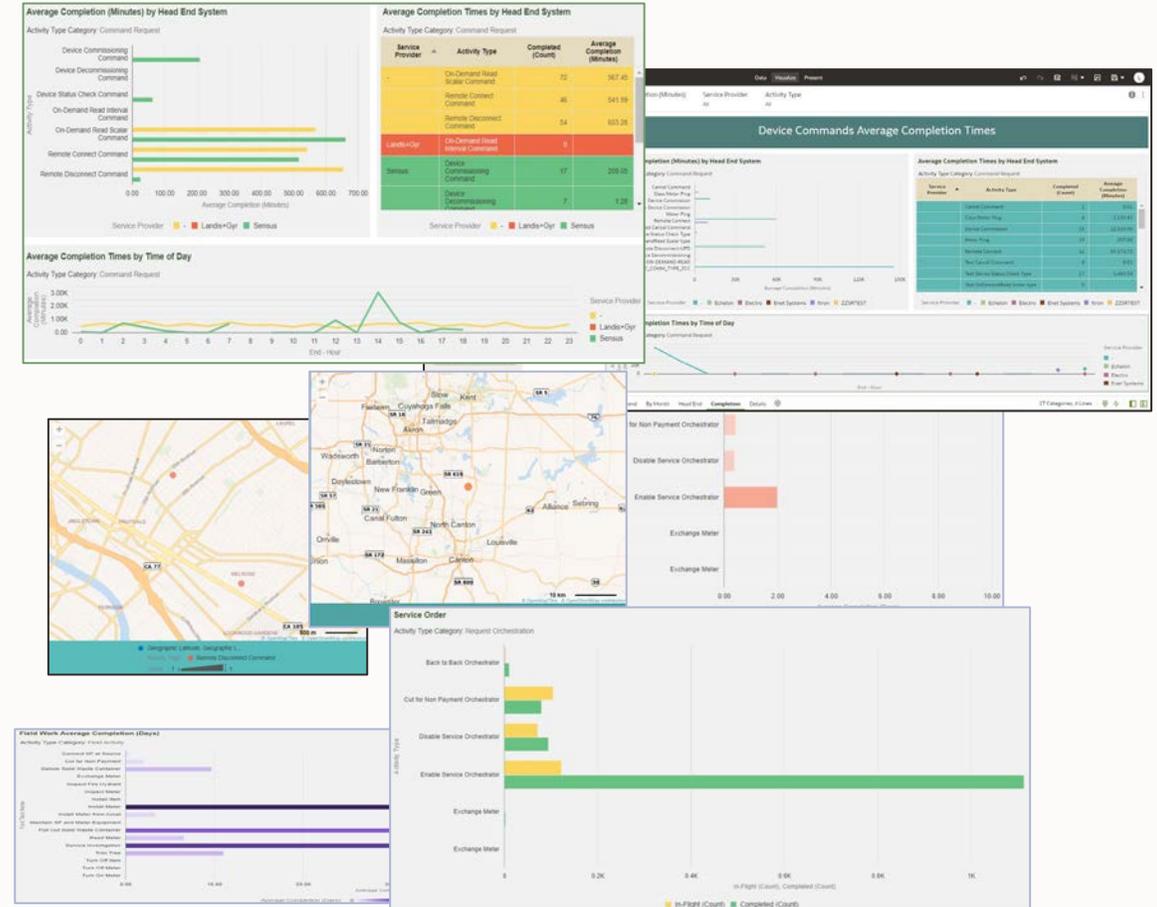
- Install meter open orders.
- Completion time to install a meter.
- AMI roll out progress
- In flight field work

Losses

- Downstream usage analysis
- Facilities with possible losses
- Identification of meter location wrongly assigned.

Consumption

- Usage consumption by subscription type.
- Consumption analysis assisting
 - Regulatory Reporting
 - Revenue Analysis
 - Rate Design



Our mission is to help people see
data in new ways, discover insights,
unlock endless possibilities.



Analytics Opportunities



Unified Data

Innovation requires enabling cross-product analytics across the enterprise



Easy Analytics

Easy to integrate
Easy to extend
Easy to raise insights

ORACLE

One Oracle

Oracle should enable endless possibilities for uncovering insights in our customers' data



Data Democratization

Customers should be able to unlock insights in their data

Cloud Analytics

Features and Benefits

Features



Cloud based analytics platform



Productized ingest mechanism



Interoperability



Open source big data support



Base product catalog, governance



Benefit



Focus on business not IT systems



Decrease time to value and costs



Unlock data, multi-cloud support



Maximize performance, flexibility



Prevent data swamp, enable auditing

Beyond Customer Analytics

Enterprise Analytics Roadmap

Imminent



Foundational
Customer and Meter
Insights
Interval data
Performance and
reliability
enhancements

Next Up



DERMS Forecasting
Capabilities, Platform
Grid Insights
DERMS behind the meter
forecasting
Initial OCI integration to
improve data
management and ad-hoc
queries and visualization

Future



Self-Service and Asset
Analytics
Operational Technology
Outage analytics, insights
Asset Technology analytics
and insights
Self-Service insights
Third-party data support
Advanced self-service
capabilities and OCI
integration
Cloud to Cloud



Energy companies
have troves of data...

...living in data silos

Our plan is to break
down those silos



Metering News

Meter News

Important Implementation Information

- Release and Training Updates
- MSM Cube Viewer has been deprecated
- Which Measurement Extract Tool should I use? [Getting AMI Data out of MDM](#)
- MDM Best Practices have been updated. See the [Help Center](#).
- Oracle [Help Center](#) has new Meter Implementation videos





News

Release and Training Updates

Releases

- Meter Solution Cloud Service (MSCS) 23A and Meter Data Management (MDM) 2.5.0.1.1 are coming out soon
- Market Settlements Management Cloud Service (MSMCS) is being released. There is Market Settlements Management [training available](#) on Oracle University.
- Customer Cloud Service and Meter Solution Cloud Service training is being refreshed

Oracle Energy and Water Learning Subscription

[New User? Get Started Here](#)

New & Featured Content

- Learn about Utilities Cloud Services
- Get Utilities Cloud Certified!
- Learn about Customer to Meter

msm

Learning Path
9h 42m

Oracle Utilities Market Settlements Management

Learn about key Market Settlements Management functionality as well as important implementation topics such as...

[View Outline](#)



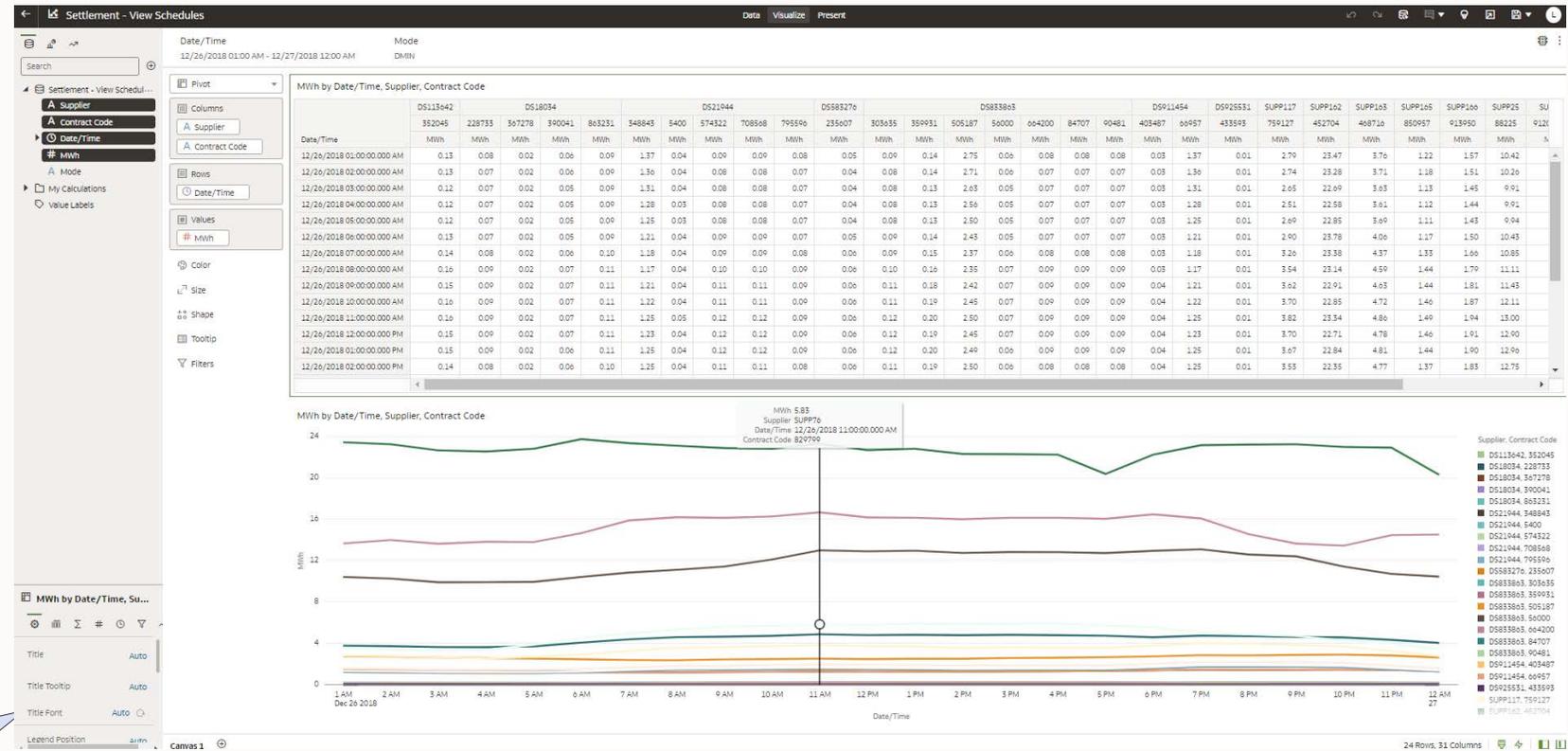


News

MSM Cube Viewer Has been Deprecated

- We no longer recommend projects use the Cube Viewer.
- OAS (Oracle Analytics Server) / OUAV (Oracle Utilities Analytics Visualizations) are much better visualization tools
- We will be providing sample configurations of settlement data using OUAV as an accelerator.

Sample OUAV UI of supplier load



Meter News

Which Measurement Extract Tool do I use?

Projects should not use Usage Transactions to export all measurements.



Export Tool	Purpose	Advantages	Limitations	Export Format
DataConnect	Made for energy management systems	Includes master and consumption data. Made for Opower. Exports interval by interval. Supports historical correction of measurements.	Does not support usage extracts for monthly scalars.	Usage File (CSV, Tab Delimited)
Configurable Consumption Extracts	Made to extract daily measurement data	Fast final measurement extract. Perfect for deregulated market participants who need to export daily measurements. Users can configure which usage subscriptions to export and which identifiers to include.	Does not include master data extracts. Provides a standard output format that must be transformed into the final format by another system.	File (JSON)
SaaS Generalized Data Export	Export data from SaaS	Based on FW tools. Can be used for almost all tables and supports change data capture.	Not configurable. Regarding usage, only applicable for Usage Transactions.	File (JSON)
SaaS Specialized Measurement Exports	Exports all measurements	Based on FW tools. Create a highly performant extract for the MDM measurement table. Exports all measurements and IMD Headers (no pre/post values).	Not configurable.	File (CSV)
Plug in Batch	Custom Exports	Allows users to export data. See the framework documentation for details.		





News

Best Practices

- MDM Best Practices have been updated. See the [Help Center](#).
 - Admin Guide, Chapter 4 Best Practices
 - Meter Solution Cloud Service Overview Guide, Performance Guidelines

The screenshot shows the Utilities Documentation website. The left sidebar contains a navigation menu with the following items: Business User Guide, Administrative User Guide, Framework Administrative User Guide, Meter Solution Administrative User Guide, Meter Solution Products Functional Overview, Additional Resources, Best Practices (highlighted), Performance Recommendations, and Referencing Master Data by Identifiers. The main content area is titled "Best Practices" and contains three links: [Performance Recommendations](#), [Referencing Master Data by Identifiers](#), and [Recommendations for Creating an On-Premises Production Environment](#). Below these links is a "Parent topic" section with a link to [Meter Solution Administrative User Guide](#).

The screenshot shows the Utilities Documentation website. The left sidebar contains a navigation menu with the following items: Meter Solution Cloud Service Overview Guide, Meter Solution Cloud Service Overview, Welcome to Oracle Utilities Meter Solution Cloud Service, Oracle Utilities Meter Solution Cloud Service Applications, and Oracle Utilities Meter Solution Cloud Service Documentation. The main content area is titled "Performance Guidelines" and contains a paragraph: "This section provides a number of performance-related guidelines and recommendations to take into account when implementing Oracle Utilities Meter Solution Cloud Service. This includes guidelines related to the following:" followed by a bulleted list of links: [Initial Measurement Data and Event Processing](#), [Usage Transactions](#), [User Interfaces](#), [Commands and Events](#), and [General Topics](#).





News

New how to videos to make your life easier

- Oracle [Help Center](#) has new Meter Implementation videos

New Implementation video in addition to release readiness videos

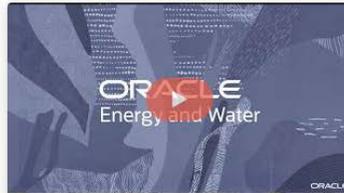
Oracle Utilities Meter Solution Cloud Service

Videos

View

Sort by Featured Title Group by Category

Implement Meter Solution Cloud Service



Dynamic Aggregation for Consumption Analytics Configuration

This video describes how to configure dynamic aggregations for Consumption Analytics in Meter Solution Cloud Service. For more information, see [Consumption Analytics Aggregations in the User Guide](#).



Meter Operational Dashboard Configuration

This video describes how to configure the Meter Operational Dashboard.

For more information, see [Configuring the Meter Operational Dashboard in the User Guide](#).



Product Use Metrics Dashboard Configuration

This video describes how to configure the Product Use Metrics Dashboard.

For more information, see [Configuring the Product Use Metrics Dashboard in the User Guide](#).



Service Order Management Operational and Trends Dashboard Configuration

This video describes how to configure the Service Order Management Operational and Trends Dashboard.

For more information, see [Configuring the Service Order Management Dashboards in the User Guide](#).



Calls to Action



Calls to Action

Visit Oracle Help Center

- What's New
- Release notes
- New Feature Summary
- Maintenance Pack
- Documentation
- Many Videos

The screenshot shows the Oracle Help Center interface. At the top, there is a navigation bar with the Oracle logo, a menu icon, the text "Help Center", a search bar containing "Meter Solution Cloud Service", and a search icon. Below the navigation bar, the breadcrumb path is "Home / Industries / Energy Water / Meter Solution Cloud Service". The main heading is "Oracle Utilities Meter Solution Cloud Service". Underneath, the section is titled "Videos". There is a "View" dropdown menu set to "Release 21C - What's New for Oracle Utilities". Below that, there are sorting options: "Sort by" with buttons for "Featured" (selected) and "Title", and a "Group by Category" toggle switch which is turned on. The main content area displays three video thumbnails, each with the Oracle Utilities logo and a play button icon. The first video is titled "21C Analytics and Visualization Consumption Analytics" with a description: "This video describes how to analyze and report aggregated consumption by". The second video is titled "21C Testing Accelerator Test Data Enhancements" with a description: "This video describes test data screen enhancements in the Oracle Utilities Test". The third video is titled "21C Throttling Disconnect Commands" with a description: "This video describes how you can throttle the number of AMI disconnect". At the bottom left of the screenshot, there is a URL: <https://support.oracle.com>.

Help Center: <https://docs.oracle.com/en/industries/utilities/meter-solution-cloud-service/videos.html>



Open Discussion

Thank you



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