



Oracle Energy and Water
Customer Edge
Conference

Oracle Utilities Application Framework

Technology Overview and Roadmap, March 2023

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Oracle Energy and Water

March 2023

Agenda

Background Roadmap

1. What we've done since the last Edge
2. What we're working on now
3. What we're planning or looking at for the future

OUAF Focus Areas for the next 12+ Months



UI Framework
Adopting
modern
components
and templates

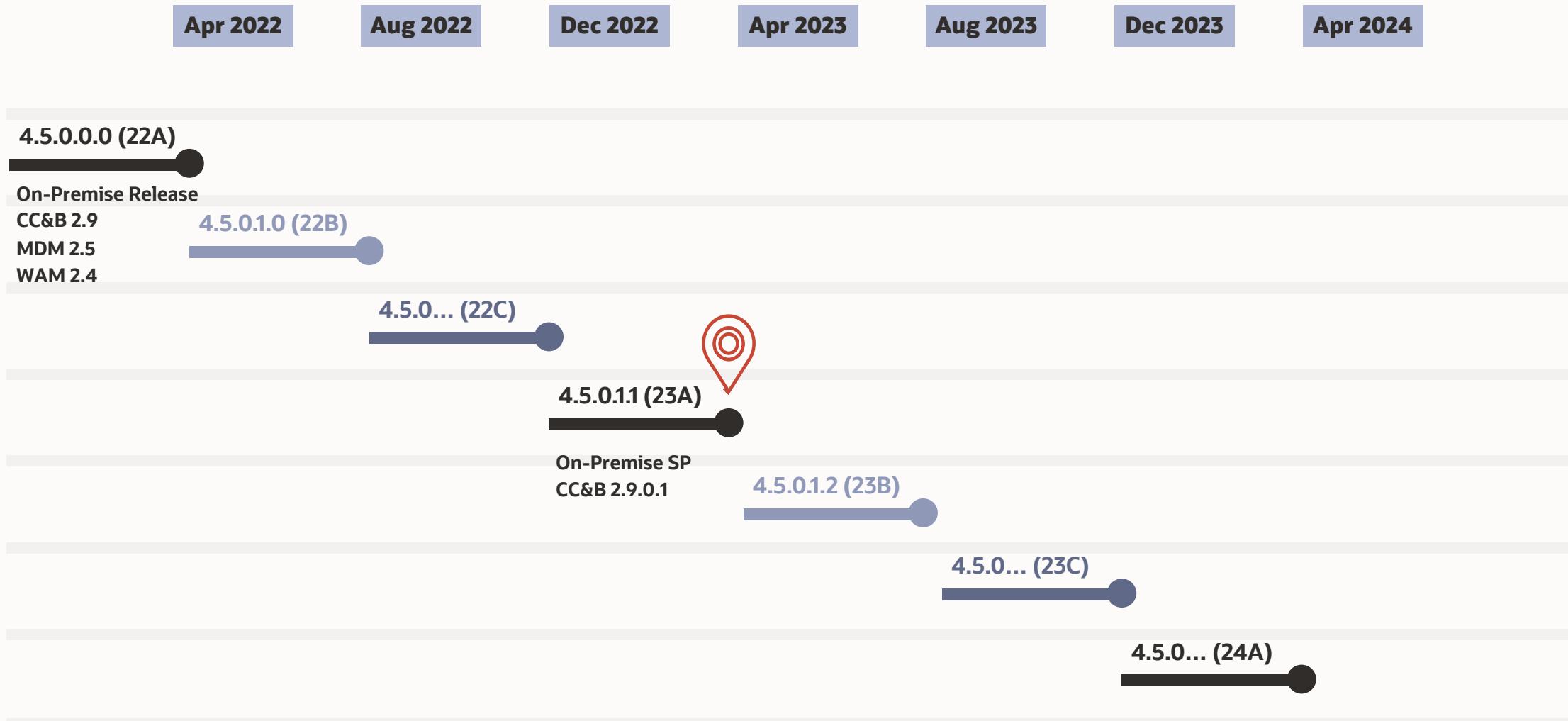


Low Code / No Code
Modernize
Config Tools



Misc
Security
Batch
etc.

Recent / Next Releases Timeline



Deprecations

XAI (22A)

- Announced 4 years ago, replaced with IWS.

Oracle Help (23A)

- Replaced with new help system delivered over the internet.

Application Viewer (22B)

- Replaced with new, "live" Application Explorer



&



We are ready to upgrade to WLS 14.x, but are held up by the state of **Java Long Term Support (LTS)**.

- **Java 17**: we'd like to move to this as soon as possible, but there is currently no version of WLS that works with Java 17. The current status is that a Java 17-compatible version of WLS (14.1.2) will be released in late 2023 and it will be an LTS release.
- **Java 11**: we have considered moving to Java 11 with WLS 14.1.1, however, extended support for Java 11 ends in 2026.
- **Java 8**: this is our current supported version, with WLS 12.2.1.4. Java 8 extended support ends in 2030. Java 8 continues to receive security patches via the monthly Critical Patch Update (CPU) through its extended support date. We plan to continue with Java 8 until Java 17 is supported by WLS.

Java 8 is being retrofitted with the Java 17 JVM (not the language features of Java 17, but the new high performance garbage collector and memory enhancements). This is referred to as the Java 8 Enterprise Performance Pack. We are currently testing this in our development labs.

Summary: we will continue to use and support Java 8 on WLS 12.2.x until a LTS version of WLS is available for Java 17. In the meantime, we may upgrade Java 8 to the Enterprise Performance Pack if the results of our research are positive.



Since the last Edge

UX Modernizations

21C/22A

New UI Theme, now the default

The screenshot displays a modernized version of the Utilities Customer to Meter dashboard. A blue callout on the left points to the 'New Fonts, Icons' section, highlighting the updated UI elements. Another blue callout on the right points to the 'Contextual Insights' section, showing a warning about a potential shutoff and energy usage trends. A third blue callout at the bottom left points to the 'Moving Service?' dropdown. A large blue callout at the top right covers the 'Unified Search' bar, which is now the default theme. The dashboard itself shows customer information for 'Maria Villa', including a phone number, email, and driver's license. It also displays a current balance of \$289.31 and a 'Take a Payment' button. The main area features a 'Billing Details' table and a stacked bar chart showing utility costs over time, with a weather line overlay. The chart includes a legend for Electric, Gas, Water, and Weather line.

New Fonts, Icons

Unified Search

Contextual Insights

Option to move dashboard right or left

Moving Service? ▾

Maria Villa

Life Support Sensitive Load EV Owner

Phone 555-222-3333

Email maria@mymail.com

Driver's License CA-*****2342

Current Balance \$289.31 Take a Payment >

CIS Division California

Customer Class Residential

Family Member Dubois, Gabriel

800 Clement St. San Francisco, CA 94103

Electric (EV-TOU) On Smart Meter

Gas (STANDARD) On

Activity

Today, October 26

- Payment Received for \$254.89 Amex ending in 1000, Frozen
- Field Activity - Meter Swap at 1 Main Street SF, Active
- Customer Contact Customer Inquiry, Dave Elliot
- Yesterday, October 25
- Web Activity - [username?] Automatic Payment Setup Task, Complete

Insight

Shutoff

Minimum payment amount of \$##.## required to avoid shutoff

Threshold for non-shutoff is X.

Take a Payment Action

Customer is trending towards using XX% more energy than they used last month.

See Usage ▾

Usage and Billing

Financial History

Payment Arrangements

Credit & Collections

Billing Details

Date	Total Amount
Nov 11, 2019	\$45.00
Dec 12, 2019	\$55.00
Jan 13, 2020	\$46.00
Feb 12, 2020	\$41.00
Mar 12, 2020	\$43.00
Apr 11, 2020	\$40.00

Cost All premises Last 12 months

USD \$

Electric Gas Water Weather line

Electric Estimate Gas Estimate Water Estimate Weather Estimate

Nov 11 2019 Dec 12 2019 Jan 13 2020 Feb 12 2020 Mar 12 2020 Apr 10 2020 May 12 2020 Jun 11 2020 Jul 14 2020 Aug 12 2020 Sep 11 2020 Oct 14 2020 Nov 12 2020

Unified Search

Improving the Usability of Search

The screenshot shows the Oracle Utilities Customer To Meter search interface. A search bar at the top contains the placeholder "Search Assistant". To the right of the search bar is a "Advanced Search" link. Below the search bar, a "Customer Meter Search" section is described: "Search for customer or meter by name, account ID, ID number, contact information (phone or email), address, badge number or serial number. Click the Advanced Search to navigate to the Customer 360 Search portal." Below this are sections for "Other Searches" (Meter Search, Asset Search, Customer Search, Asset Location Search) and "Recent Searches" (n:Brazil). A "Hints" section on the left lists search terms and their meanings: / (Search Menu), bn: (Badge Number), sn: (Serial Number), n: (Name), ad: (Address), ac: (Account ID), id: (ID Number), and c: (Contact Info). Callout boxes highlight specific features: "Recent session searches" points to the "Recent Searches" section; "Active search hints" points to the "Hints" section; "Other searches available" points to the "Other Searches" section; and "Active search details" points to the "Advanced Search" link.

Oracle Utilities Customer To Meter

Advanced Search

Customer Meter Search

Search for customer or meter by name, account ID, ID number, contact information (phone or email), address, badge number or serial number. Click the Advanced Search to navigate to the Customer 360 Search portal.

Other Searches

Meter Search Asset Search Customer Search Asset Location Search

Recent Searches

n:Brazil

Hints

/ Search Menu
bn: Badge Number
sn: Serial Number
n: Name
ad: Address
ac: Account ID
id: ID Number
c: Contact Info

Recent session searches

Active search hints

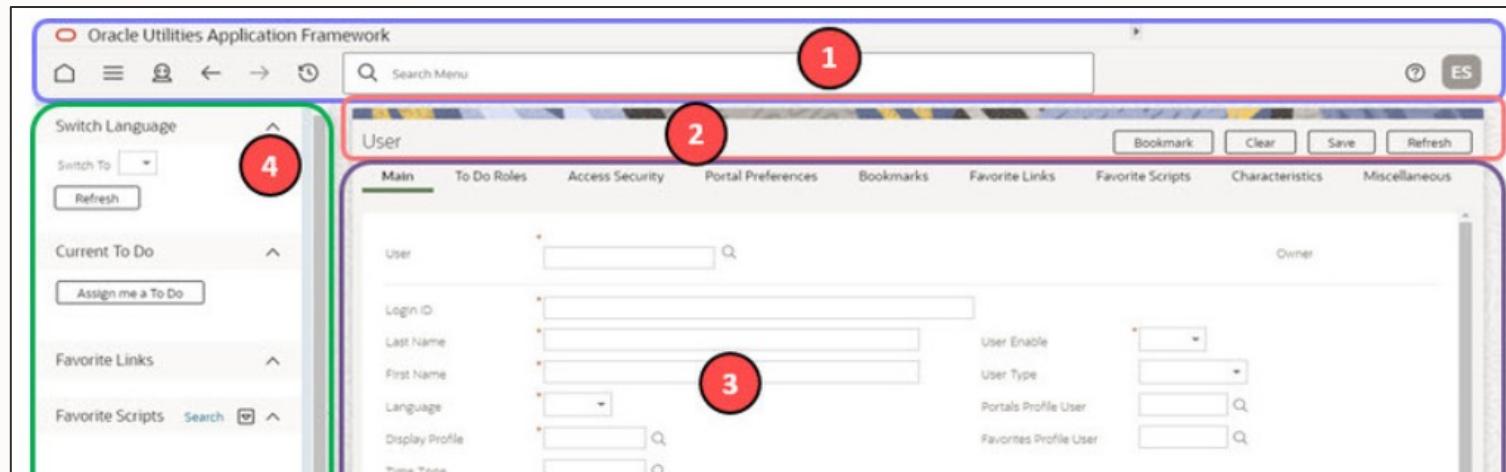
Other searches available

Active search details

Navigation Hot Keys

New hot keys are provided to more quickly jump to a different section in the application

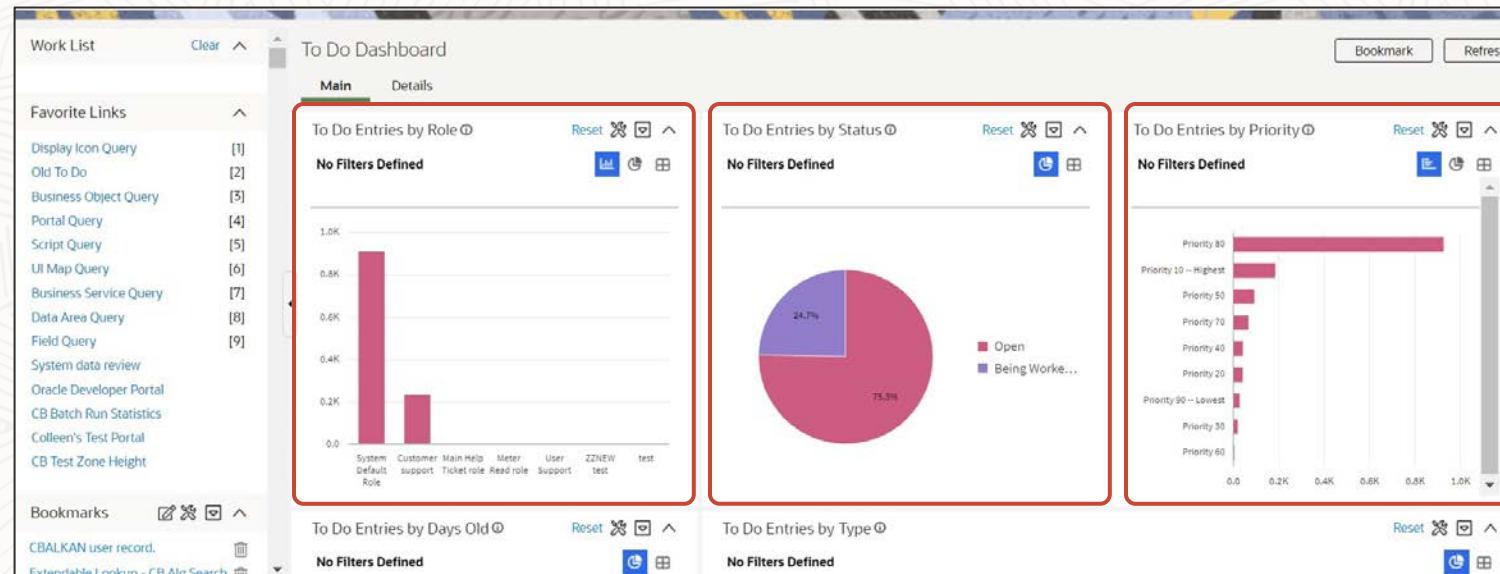
- **Alt+[,** Allows you to jump through the 4 major sections of the application
- **Shift+Alt+[,** Goes to the previous section



Navigation Hot Keys

Alt+] Allows you to jump to the next zone

Shift+Alt+] Go to the previous zone



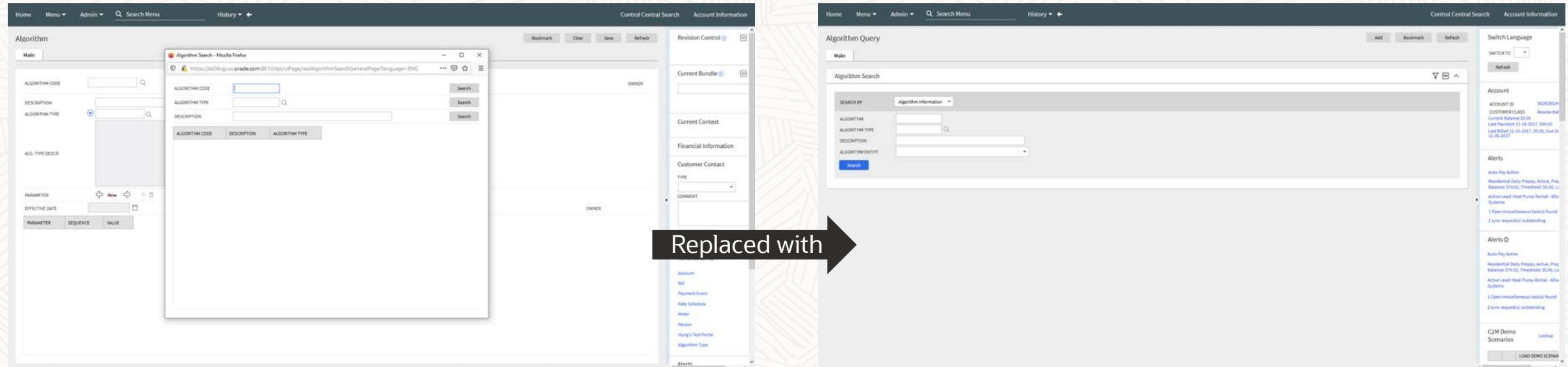
Zone Layout

More options added to support different zone heights and widths



Framework User Interface Updates

Query Portals Replace Popup Search Windows, Portals Replace Fixed Pages



Framework Objects

- Access Group
- Algorithm
- Application Service
- Business Service
- Characteristic Type
- Data Area
- Feature Configuration
- Foreign Key Reference
- Maintenance Object

- Managed Content
- Navigation Key
- Navigation Option
- Portal
- Table
- UI Map
- Zone

Backlog

- *Menu*
- *Display Icon*
- *Language*
- *Currency*

Redaction Rule Configuration

In 22B we delivered configuration for defining Redaction Rules

No runtime functionality was using the rules in that release

Redaction Rule Search

Redaction Rule Search						
Search By		Redaction Rule Information				
Expand Filters		Filters: Description PHONE				
	Redaction Rule	Description	Field Source Type	Field	Table	Redaction Function
1	ORDER-PHONE	Order Phone	Physical Field	Phone Number	Order Phone	Redact all digits with 0
2	PER-PHONE	Person Phone	Physical Field	Phone Number	Person Phone	Redact all digits with 0
3	SS-PHONE	Start/Stop Phone	Physical Field	Phone Number	Start/Stop Telephone Override	Redact all digits with 0

Define redaction rules on specific fields.

Field: Address

Main		References
Field		
Main		
Field Name	ADDRESS1	
Data Type	VARCHAR2	
Field Precision	254	
Field Scale	0	
Signed	<input type="checkbox"/>	
Description	Address	
Java Field Name	address1	
PII Class	May Contain Personal Information	
Work Field		

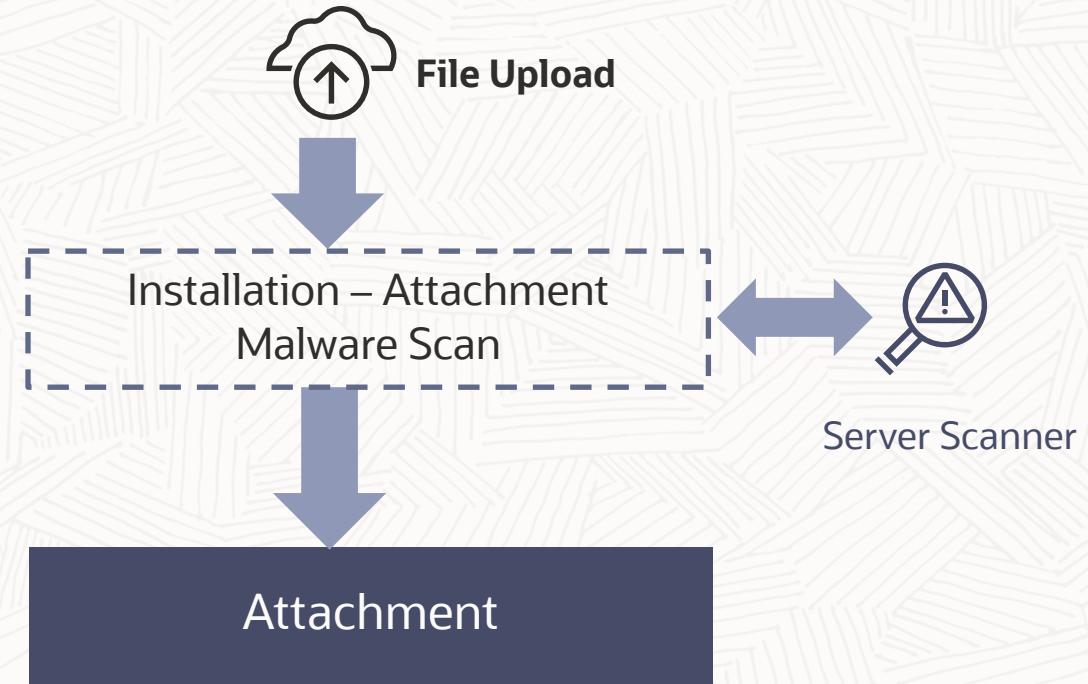
A new attribute on Field allows us to mark fields that may contain PII

Field Search

Field Search						
Search By		Additional Information (F1-FLDSRCHQ2)				
Expand Filters		Filters: PII Class May Contain Personal Information (PII)				
	Field Name	Description	Data Type	Base Field Name	Java Field Name	
1	ADDRESS	Address 2	VARCHAR2(64)		address2	
2	ADDRESS1	Address	VARCHAR2(254)		address1	
3	ADDRESS1_UPR	Address Uppercase	VARCHAR2(254)		addressUppercase	
4	ADDRESS2	Address 2	VARCHAR2(254)		address2	
5	ADDRESS3	Address 3	VARCHAR2(254)		address3	
6	ADDRESS4	Address 4	VARCHAR2(254)		address4	
7	BCC_EMAILID	Description Not Available	VARCHAR2(254)	EMAILID	bccEmailAddress	
8	CC_EMAILID	Description Not Available	VARCHAR2(254)	EMAILID	ccEmailAddress	

Malware Scanner Support

- Ability to invoke server-based malware scanner when uploading attachments
- Attachment will be not be uploaded if fails check
- We supply a default algorithm for ClamAV (F1-ATCHM-WS)
- This does not support desktop scans; it is assumed the customer has installed the malware software on the server.
- Cloud Service (SaaS) customers have an built-in malware scan used by this algorithm



Attachment – Malware Scan

There's a new Installation Options plug-in spot that is called when adding an attachment: malware scan
If an algorithm is plugged in, it is called every time an attachment is uploaded, regardless of the method.

The product has supplied a base algorithm that calls ClamAV.

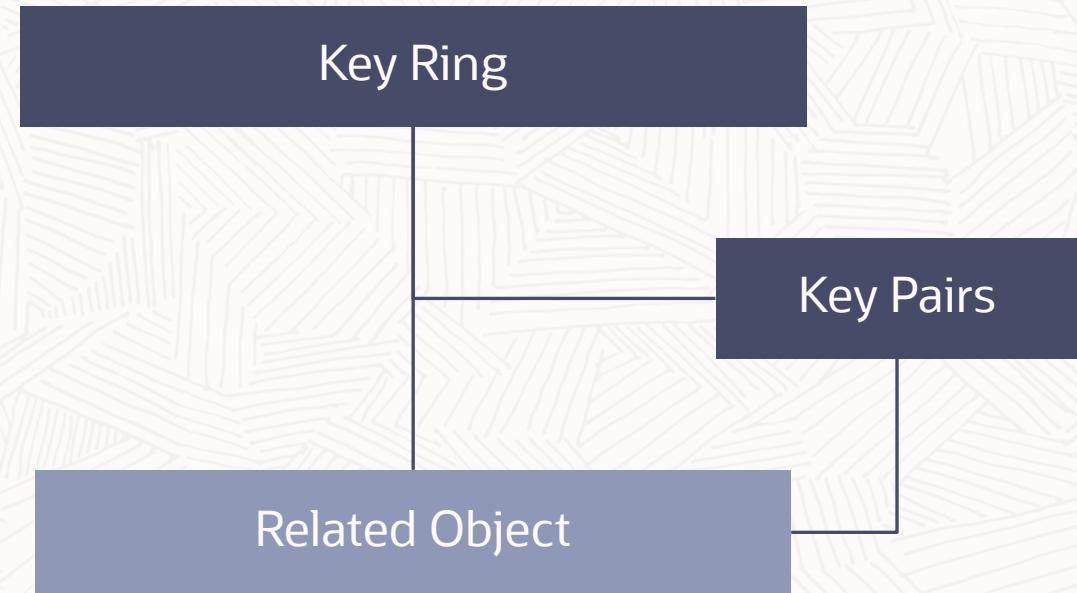
Installation Options - Framework				
Main	Messages	Algorithms	Accessible Modules	Installed Products
<input data-bbox="412 947 455 1005" type="button" value="+"/> <input data-bbox="488 947 532 1005" type="button" value="Delete"/> * <input data-bbox="558 990 839 1019" type="text" value="Attachment Malware Scan"/>	<input data-bbox="532 947 865 1005" type="text" value="System Event"/> * <input data-bbox="890 990 934 1019" type="text" value="1"/>	<input data-bbox="1121 990 1402 1019" type="text" value="F1-ATCHM-WS"/> <input data-bbox="1402 947 1786 1005" type="button" value="Attachment Malware Scan Using ClamAV"/>		

On-premise implementations
can supply their own algorithm

ClamAV itself is not provided – it
needs to be installed separately

Key Ring Support

- Inbuilt object to store keys for use across product or service
 - Allows customers to rotate keys as necessary from within application
- Complementary to the external key stores used by the product/service
- Supports RSA, Encryption, and OAuth2 Keys
- Generates key pairs
- Associated with other objects for completion of configuration
 - Object Storage Adapter
 - DSS Integration
 - *File Signing/Encryption (future)*
 - Etc..

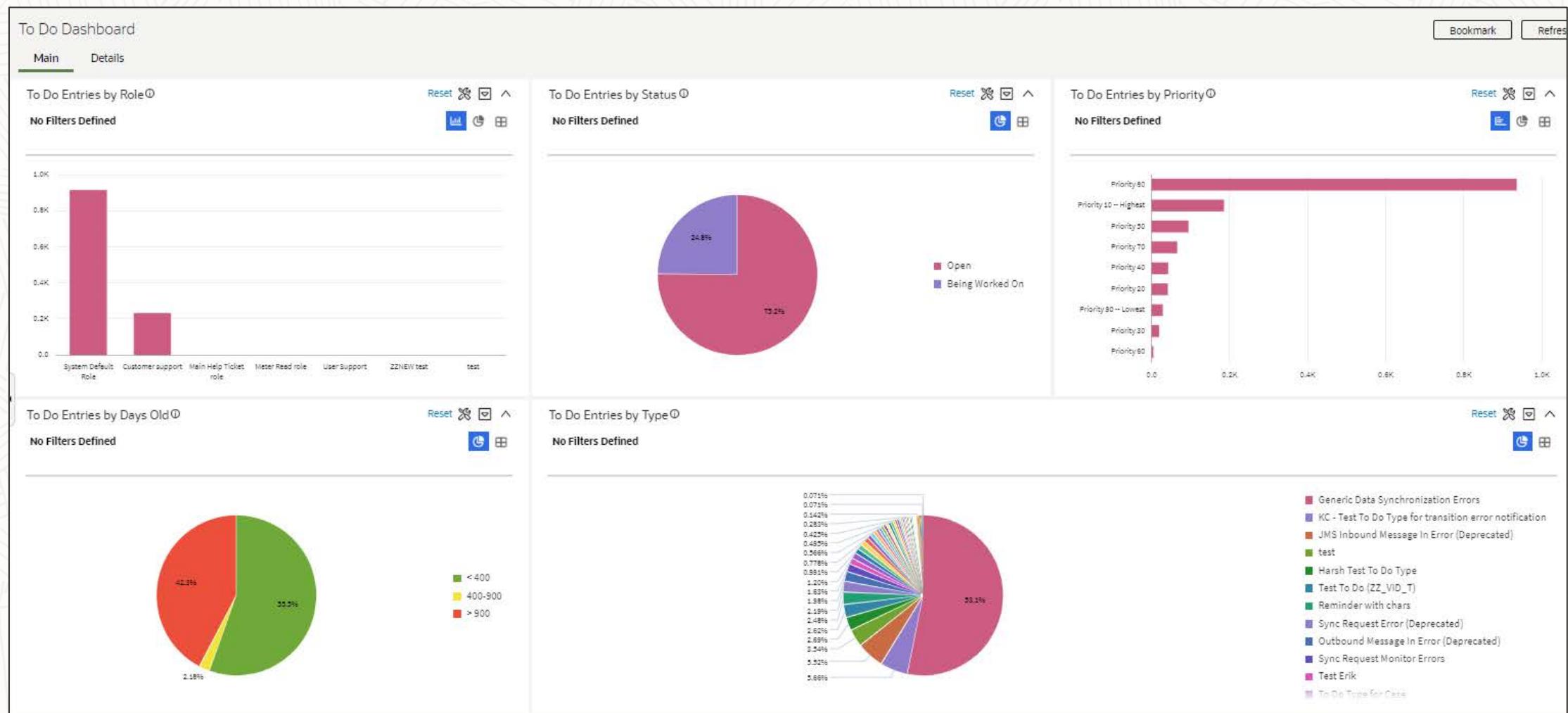


Other Security Changes

- Adopted OAuth2
- Improved HTML sanitation
 - Improved detection of HTML injection
 - Autonomous nullification of suspect code



To Do Dashboard



To Do Dashboard - Drill Into Details

Functionality equivalent to the To Do Management portal.

To Do Dashboard

Main **Details**

Your selections are carried over

To Do Details ⓘ

Filters: To Do Type Business Flag Sync Errors (F1-BSFLS) , Priority Priority 10 -- Highest (010)

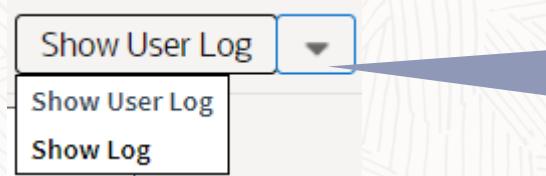
Update Assign Unassign Complete

You can further refine the list

<input type="checkbox"/>	Action	Priority	Days Old	To Do Type	Status	Assign to User	Message
<input type="checkbox"/>	Work	Priority 10 -- Highest	309	Business Flag Sync Errors	Open		Deleted To Do Types and Excluded To Do Types are mutually exclusive. Please p
<input type="checkbox"/>	Work	Priority 10 -- Highest	520	Business Flag Sync Errors	Open		Deleted To Do Types and Excluded To Do Types are mutually exclusive. Please p
<input type="checkbox"/>	Work	Priority 10 -- Highest	520	Business Flag Sync Errors	Open		Deleted To Do Types and Excluded To Do Types are mutually exclusive. Please p
<input type="checkbox"/>	Work	Priority 10 -- Highest	2350	Business Flag Sync Errors	Open		Business Flag Type not found for Standard Name.

User Log - Provide a Date Range

- In 22A we provided the ability for a system administrator to select logs for a different user (such as a batch user)



The dropdown and additional Show Log option was previously only for administrators

- In 22B we provided a date range for the log and support that for any user - so the dropdown is visible for all users that have access to Show User Log

Advanced Show Log Option - Google Chrome
Not secure | slcao351.us.oracle.com:20000/spl/usermap?language=ENG

Advanced Show Log Option

Parameters

Start Date/Time

End Date/Time

Log Entries

Save Cancel

Non-administrative user

Advanced Show Log Option - Google Chrome
Not secure | slcao351.us.oracle.com:20000/spl/usermap?language=ENG

Advanced Show Log Option

Parameters

Start Date/Time

End Date/Time

My Logs

User

Log Entries

Save Cancel

Administrator

Variables in File Names – Plug-in Driven Batch

For File Extracts, we always supported file name variables

New: variables to support the user ID

Parameter Name	Description	Detailed Description
fileName	File Name	Name of the extract file. The file will be replaced if it already exists or created if it does not. It can include the following system variables: {BC} or {batchCode}, {BN} or {batchNumber}, {RN} or {rerunNumber}, {TN} or {threadNumber}, {RDT} or {runDateTime}, {RD} or {runDate}, {RT} or {runTime}, {USR} or {userId}. For a multi-threaded run, {threadNumber} will be inserted if not supplied. For the user ID parameters, the submission user value is used, not the "batch user". If the file name ends in .zip or .gz, then the system will compress the file with the indicated compression method.

New: for File Upload jobs, use variables for renaming a 'processed' file

processedFileExtension	Processed File Extension	The text to be appended to the file name (with a dot ".") after the file has been processed. Default is "PROCESSED". The parameter supports the following variables in addition to text but must be configured before the text. {BC} or {batchCode}, {BN} or {batchNumber}, {RN} or {rerunNumber}, {TN} or {threadNumber}, {RDT} or {runDateTime}, {RD} or {runDate}, {RT} or {runTime}, {USR} or {userId}
------------------------	--------------------------	--

Batch controls define their parameters and can define parameter values

Adding a Batch Job Submission request

Sequence	Parameter Name	Description	Detailed Description	Required	Parameter Value
* 10	maintenanceObject	Maintenance Object	The maintenance object whose data is being exported.	<input checked="" type="checkbox"/>	ALGORITHM
* 20	fileNamePrefix	File Name Prefix	An optional file name prefix to further identify the export files.	<input type="checkbox"/>	
* 30	filePath	File Path	The file path where the output should be placed. Refer to Referencing URIs in the user documentation for more details.	<input checked="" type="checkbox"/>	
* 40	manifestOption	Manifest Option	If set to 'Y' a manifest file is created with the following name: {batchCode}_{batchNumber}_{rerunNumber}_manifest.json	<input type="checkbox"/>	Y

When using the online Batch Job Submission page to submit a job, the UI defaults the parms and brings the preset parameter values

Other ways of submitting the batch job, including through our own REST API did not default parameter values.

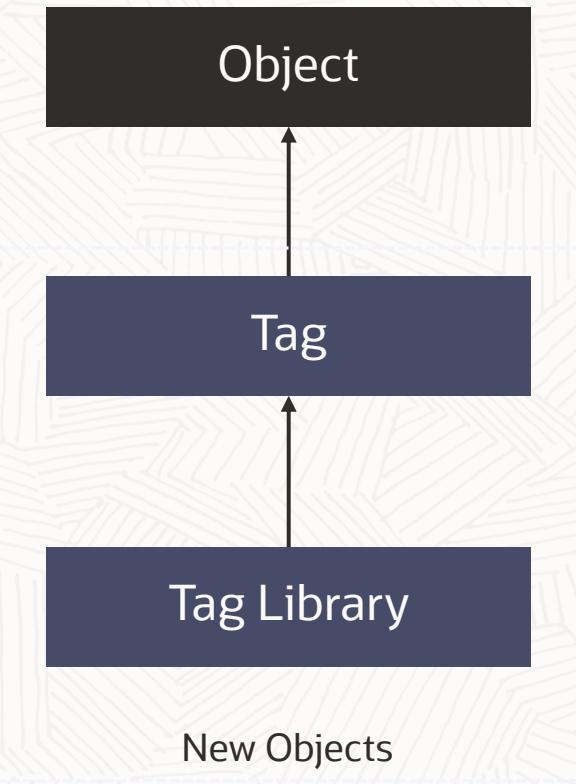
New in 22C, parameters defaulted always from the batch control always

Parameter Name	Description	Parameter Value	Detailed Description
maintenanceObject	Maintenance Object	ALGORITHM	The maintenance object whose data is being exported.
fileNamePrefix	File Name Prefix		An optional file name prefix to further identify the export files.
filePath	File Path		The file path where the output should be placed. Refer to Referencing URIs in the user documentation for more details.
manifestOption	Manifest Option	Y	If set to 'Y' a manifest file is created with the following name: {batchCode}_{batchNumber}_{rerunNumber}_manifest.json

Web Service Name	Batch Job Submission
Operation Name	submit
Description	Submit Batch Job
Script	Submit Batch Job View Schema
HTTP Method	Post
URI Component	/
Detailed Description	This operation is used to add a batch job submission record for the input batch control. This API results in a generated Batch Job ID which can be used to review the status and potentially cancel the request, if needed. The system defaults the values of the parameters from the batch control, if not provided by the caller. When providing parameters, only the parameter name and parameter value are required. The sequence may be provided but is not necessary. Note that if default values are defined for a required parameter, that value is used if not provided by the caller. Default values defined on the batch control for optional parameters are ignored.

Introduced a Tag Object

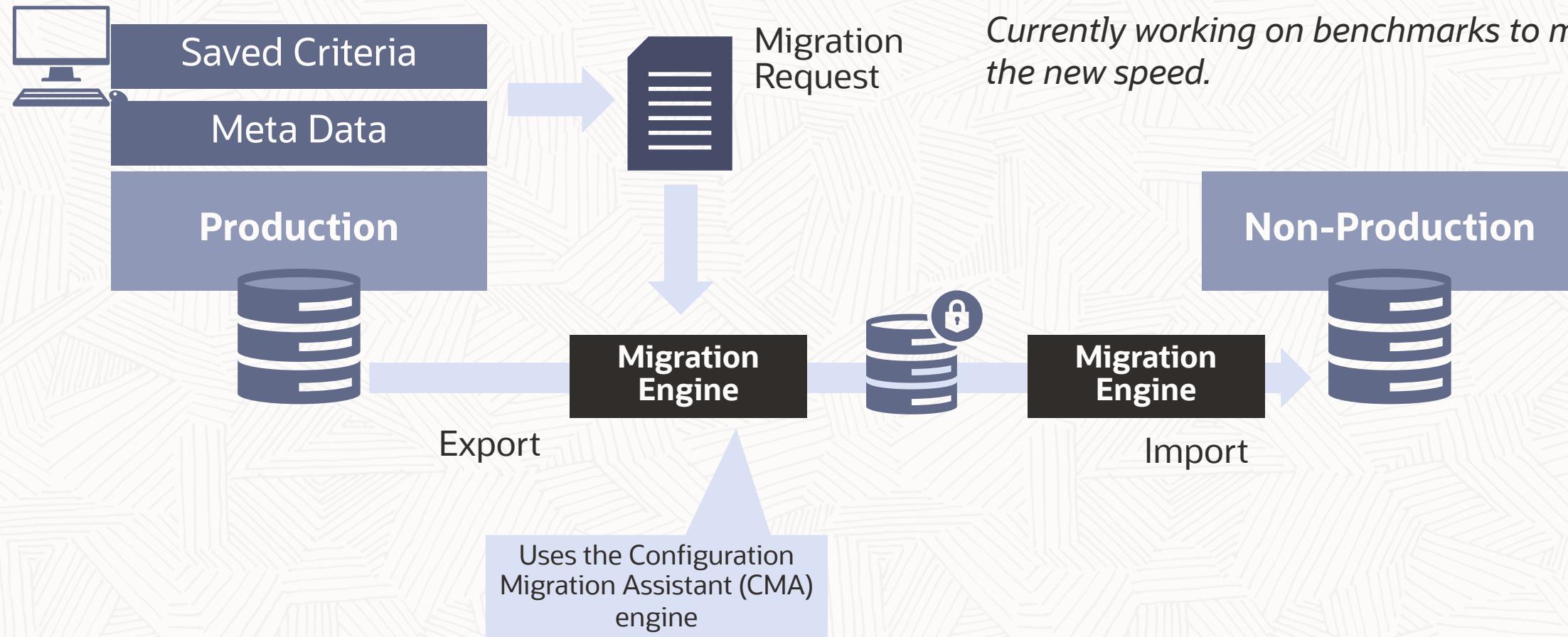
- Introduce a new OUAF object to hold tags
- Tag object holds tags and other information
 - Tags have internal identifiers (to support multi-lingual)
 - Tags have literals to display
 - Tags have owners (Product tags vs custom tags)
 - Tags will be predefined and selected by authorized users
 - This avoid tag "variations"
- Tags are migrated by CMA to retain consistency
- Oracle will supply preset library of tags with each release to encourage reuse
- Tag Library would be shared across ALL Oracle Utilities products



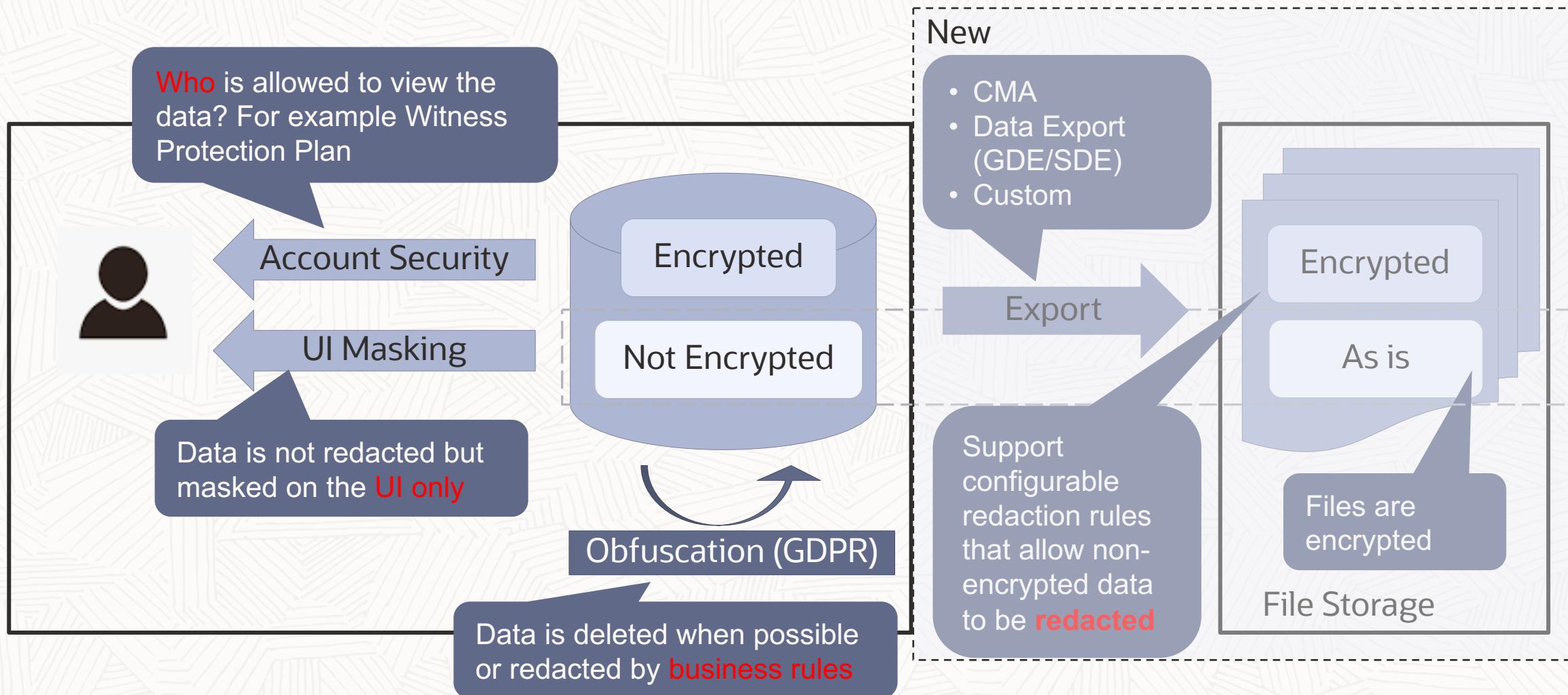


What we're currently working on

Test Data Subsetting



Masking and Obfuscation of sensitive data - Data Security Options



Data Redaction - CMA

By default, now any redaction rules defined for data being exported via CMA are applied

Migration Data Set Export

Main

Migration Request: C1-Users

* Export Directory: @F1_CMA_FILES@/export

File Name: myFile

File Suffix: cma

Export Description: Export of users

Source Environment Reference: <https://ugbu-phx-90.snphxprshared1.gbu cdsint02phx.ora>

Redaction Option:

- Apply redaction rules
- Do not apply redaction rules

Save Cancel

When creating a data set export, some users can choose to apply data redaction or not

Main

Application Service: F1MIGRDEXP

Description: Migration Data Set Export BO

Detailed Description

Access Modes

Access Mode
Add
Change
Cancel
Delete
Do Not Apply Redaction Rules
Pending
Inquire

This option is only visible to users that have security for the 'Do Not Apply Redaction Rules' access mode

Obfuscation Portal

Obfuscation Configuration

Main

Redaction Rules

	Redaction Rule	Description	Field	Field Source Type	Table	Redaction Function
1	ORDER-PHONE	Order Phone	Phone Number	Physical Field	Order Phone	Redact all digits with 0
2	PER-PHONE	Person Phone	Phone Number	Physical Field	Person Phone	Redact all digits with 0
3	SS-PHONE	Start/Stop Phone	Phone Number	Physical Field	Start/Stop Telephone Override	Redact all digits with 0

Add  

Masking

Encryption

	Option Type	Sequence	Value
1	Algorithm Info	1	alias: 'QAAES', mode: 'PCBC', padding: 'ISO10126Padding'
2	Field Encryption	1	table='CI_ACCT_APAY', field='EXT_ACCT_ID', alias='QAAES', encryptedField='ENCR_EXT_ACCT_ID', maskAlg='CMDATAMASKIN'
3	Field Encryption	2	table='CI_PER_SS_PAYOPT', field='CREDIT_CARD_NBR', alias='QAAES', encryptedField='ENCR_CREDIT_CARD_NBR', hashField='HASH_CREDIT_CARD_NBR', hashAlias='Hmac256', maskAlg='CMDATAMASKIN'
4	Field Encryption	3	table='CI_PER_SS_PAYOPT', field='EXT_ACCT_ID', alias='QAAES', encryptedField='ENCR_EXT_ACCT_ID', hashField='HASH_EXT_ACCT_ID', hashAlias='Hmac256', maskAlg='CMDATAMASKIN'
5	Field Encryption	4	field='CREDIT_CARD_NBR', alias='QAAES', encryptedField='ENCR_CREDIT_CARD_NBR', maskAlg='CMDATAMASKIN'
6	Field Encryption	5	field='EXT_ACCT_ID', alias='QAAES', encryptedField='ENCR_EXT_ACCT_ID'
7	Field Encryption	6	table='CI_CIS_DIV_RTYP', field='OVRD_CO_ID', alias='QAAES', encryptedField='ENCR_OVRD_CO_ID', maskAlg='CMDATAMASKIN'

Edit  

Review Fields for Redaction Rules 

	Description	Field Name
1	Address	ADDRESS1
2	Address 2	ADDRESS
3	Address 2	ADDRESS2
4	Address 3	ADDRESS3
5	Address 4	ADDRESS4
6	Address Uppercase	ADDRESS1_UPR
7	City	CITY
8	City Uppercase	CITY_UPR
9	County	COUNTY
10	Description Not Available	BCC_EMAILID
11	Description Not Available	CC_EMAILID

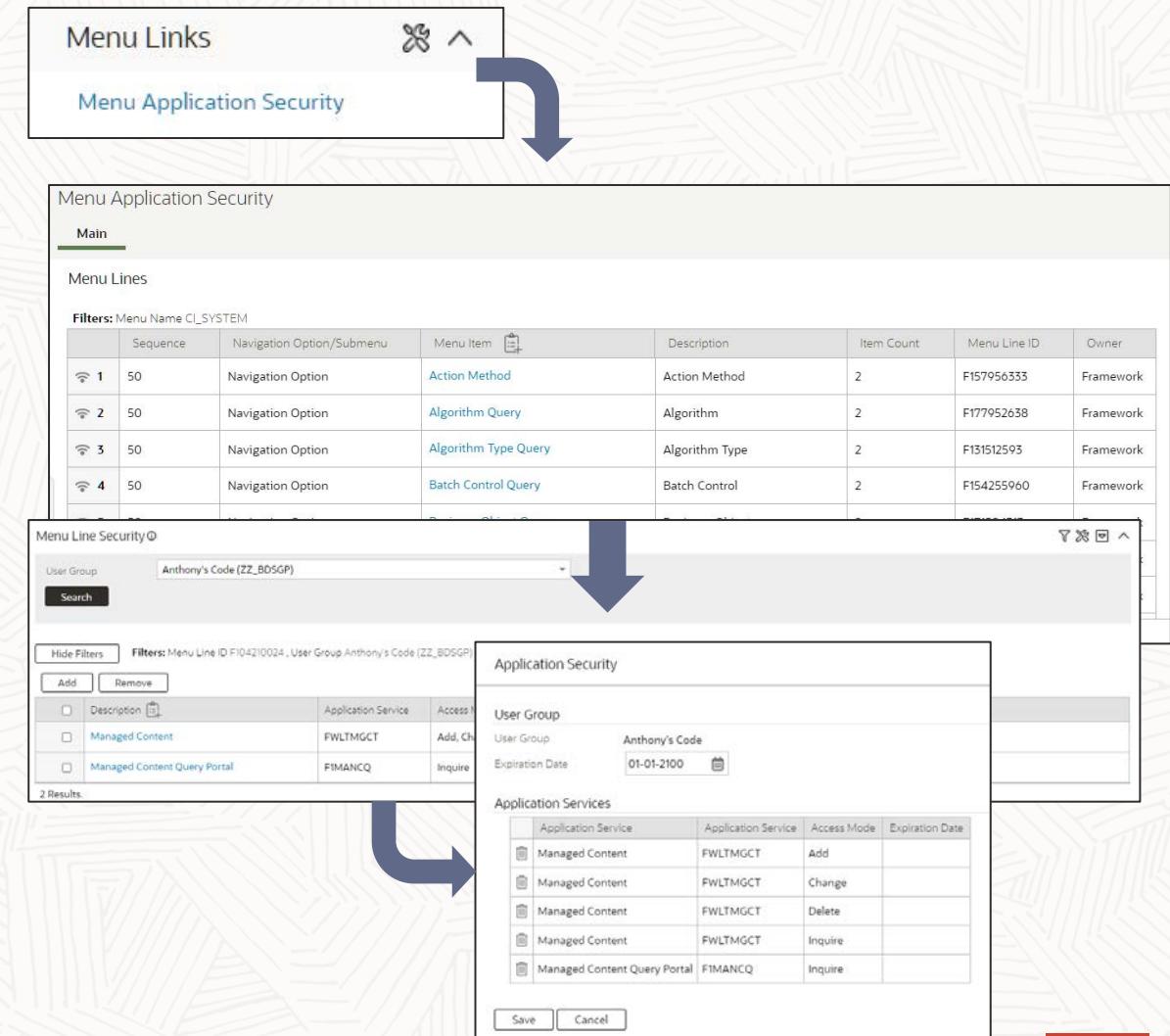
Add 

Included is a zone listing the fields marked as potentially including PII

Menu Security Portal

- New function that lists all the application services necessary to use a menu option
- You can then attach the service to a user group of your choice
 - Existing services and access modes are listed
- Flexibility on what services and access modes you can assign in a simple dialog
- This will reduce issues in managing application services

Note: Services dynamically allocated in code are not captured in this release.



Application Service Security

Review Application Security rights by menu, dashboard zones, batch processes, etc. via new portal, Application Security Query.

Manage security by comparing users

Identify new services by cloud release

Improves management of security definitions

Find new services

The image displays three separate windows of the 'Application Security Query' interface, each with a different search configuration. Each window is accompanied by a callout box with text.

- Top Right Callout:** 'Manage by rights' points to the first window, which shows the 'Search By' dropdown set to 'Application Security Information'. The 'Component Type' dropdown is open, showing options like 'Batch Control', 'Dashboard Zone', 'Internal', 'Menu Line', 'Miscellaneous', 'Report Definition', 'System', 'Unclassified', and 'Web Service'. The 'Component Type' dropdown is highlighted with a blue selection bar.
- Bottom Right Callout:** 'Compare users' points to the second window, which shows the 'Search By' dropdown set to 'User Comparison'. The 'Component Type' dropdown is open, showing the same list of options as the first window. The 'Component Type' dropdown is highlighted with a blue selection bar.
- Bottom Left Callout:** 'Find new services' points to the third window, which shows the 'Search By' dropdown set to 'Release Information'. The 'Release Version' dropdown is set to '23A'. The 'Application Service Description' input field is empty. The 'Search' button is visible at the bottom.

User Group Security

- Support for mass actions for services, users, security types, etc.
- Implementation of Service Manager
- Easier management of permissions

Add Application Service / Access Modes 

Security Type Authorization 

Update		Application Service Description 	Application Service	Security Type	Authorization Level	Other Authorization Levels
<input type="checkbox"/>	Data Masking	C2M-MASK	Mask bank account number		Authorized (unmasked), Not authorized (unmasked)	
<input type="checkbox"/>	Data Masking	C2M-MASK	Mask social security number		Authorized (unmasked), Not authorized (unmasked)	
<input type="checkbox"/>	Person	CILCPERP	Receive Duplicate Person Warning		Receive Error (Not Authorized), Receive Warning	
<input type="checkbox"/>	Premise	CILCPRMP	Field Level Security - Protect Field	Authorized	Not authorized	

4 Results.

User Group: System User Group

Main Users **Service Manager** Secured Components Search

Application Service / Access Modes 

Filters: User Group System User Group

<input type="checkbox"/>	Description 	Access Mode	Application Service	Expiration Date
<input type="checkbox"/>	Account	Delete	CILCACCP	01-01-2100
<input type="checkbox"/>	Account	Inquire	CILCACCP	01-01-2100
<input type="checkbox"/>	Account / Person Replicator	Add	CILCACRP	01-01-2100
<input type="checkbox"/>	Account / Person Replicator	Change	CILCACRP	01-01-2100
<input type="checkbox"/>	Account / Person Replicator	Inquire	CILCACRP	01-01-2100
<input type="checkbox"/>	Account Activity History Zone	Inquire	CILCAAHHP	01-01-2100
<input type="checkbox"/>	Account Appointment	Inquire	X1APPT	01-01-2100
<input type="checkbox"/>	Account Bill/Payment History	Inquire	C1ACBLPY	01-01-2100
<input type="checkbox"/>	Account Bill/Payment History	Inquire	CILFBPHP	01-01-2100

1000 Results. More rows exist.

Add Application Service / Access Mode 

Users 

Filters: User Group System User Group

<input type="checkbox"/>	User ID	User 	Expiration Date
<input type="checkbox"/>	AAGARWAL	Agarwal, Ashish	01-01-2100
<input type="checkbox"/>	AGROBE	Grobe (C2M 2.8.0.0.2Demo), Adam	01-01-2100
<input type="checkbox"/>	AMACKENZ	Mackenzie, Angus	01-01-2100
<input type="checkbox"/>	AMATIUSH	Matiushin (C2M Demo+), Alexander	01-01-2100
<input type="checkbox"/>	AMCO	Co, Anna	01-01-2100
<input type="checkbox"/>	AOVCHAR	Ovchar (C2MO 2.8.0.0.1Demo), Aleks	01-01-2100
<input type="checkbox"/>	ARFULLER	Fuller, Alex	01-01-2100
<input type="checkbox"/>	ASHUKLA	Shukla, Ashish	01-01-2100
<input type="checkbox"/>	ATADANTO	Toronto (C2M 2.8.0.0.1Demo), Amanda	01-01-2100

62 Results. Page 1 of 1 (62 records).

Extensions Dashboard

Extensions Dashboard

Bookmark
Refresh

Main

Extensions Summary ⓘ

Maintenance Object	Count
Algorithm Type	2
Application Service	55
Batch Control	1
Business Object	3
Inbound Web Service	1
Inbound Web Service Operation	8
Maintenance Object	2
Migration Plan	1
Migration Request	3
Outbound Message Type	72
Portal	1
Script	9
To Do Type	3
XAI Inbound Service	1

Extension Entities ⓘ

Filters: Maintenance Object Maintenance Object (MAIN OBJ)

	Entity	Primary Keys	Extended
Activity (W1)		W1-ACT	Yes
Environment Reference		ENV REF	

Extension Details ⓘ

Filters: Maintenance Object Maintenance Object (MAIN OBJ) , Primary Key 1 W1-ACT

Table	Key 1	Key 2	Key 3	Key 4	Key 5
Maintenance Object Option	W1-ACT	F1BP	71	F1SY	

Bring existing Custom Tables and Java Extensions from on-premise CC&B or C2M into SaaS.
Only applies to existing customers. New SaaS customers must use our standard Cloud SDK.

Custom Tables



- Tables, Columns, Indexes only. No stored procedures, no triggers, no materialized views, etc.
- Customer will define these artifacts in the OUAF meta data, and self-service tools will deploy the necessary DDL.

Custom Java



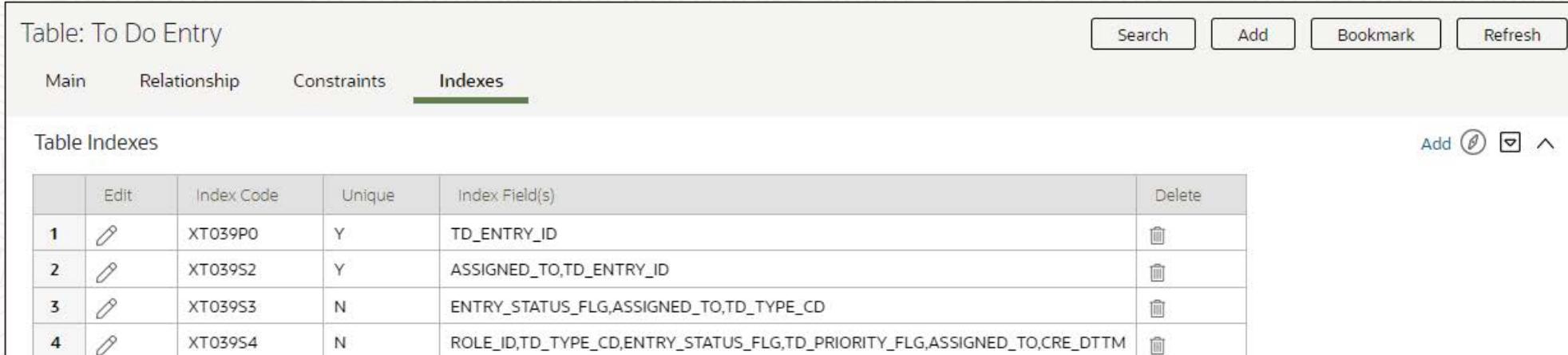
- Java (including JOBOL) for batch programs, plug-in algorithms, change handlers
- Must bring source code, no 3rd party libraries, and must pass the Java Allow List
- Self-service tools will scan the code, compile it, and deploy it.
- Development takes place with an on-premise development-only license for CC&B/C2M (new SKU)

This is on **Controlled Availability (CA)** until further notice. Tables CA in 22B, Java in 22C.

Table Indexes

The ability to define indexes was added for CM Tables – so that client indexes could be defined
In product, we had an internal table that captured our index metadata

In this release we are now populating base indexes here so that they are visible to us and our clients



	Edit	Index Code	Unique	Index Field(s)	Delete
1		XT039P0	Y	TD_ENTRY_ID	
2		XT039S2	Y	ASSIGNED_TO,TD_ENTRY_ID	
3		XT039S3	N	ENTRY_STATUS_FLG,ASSIGNED_TO,TD_TYPE_CD	
4		XT039S4	N	ROLE_ID,TD_TYPE_CD,ENTRY_STATUS_FLG,TD_PRIORITY_FLG,ASSIGNED_TO,CRE_DTTM	

Our internal procedures have changed to
populate this metadata when running the
'metadata population' script

Hot fixes that add or update
indexes should also update
this metadata

Improved HTML Editor with Code Mirror

Previous release

```

<div style="display:none">
<input type="text" id="selectedCharacteristicType" oraField="charTypeInfo/input/characteristicType"></input>
<input type="text" id="selectedCharacteristicValue" oraField="charTypeInfo/input/characteristicValue"></input>
<input type="text" id="selectedAdhocCharacteristicValue" oraField="charTypeInfo/input/adhocCharValue"></input>
<input type="text" id="selectedFkValue1" oraField="charTypeInfo/input/fkValue1"></input>
<input type="text" id="selectedFkValue2" oraField="charTypeInfo/input/fkValue2"></input>
<input type="text" id="selectedFkValue3" oraField="charTypeInfo/input/fkValue3"></input>
<input type="text" id="selectedFkValue4" oraField="charTypeInfo/input/fkValue4"></input>
<input type="text" id="selectedFkValue5" oraField="charTypeInfo/input/fkValue5"></input>
<input type="text" id="charTypeFlag" oraField="charTypeInfo/output/charTypeFlg"></input>
<input type="text" id="charValInfo" oraField="charTypeInfo/output/charValInfo"></input>
<input type="text" id="fkRefSearchZone" oraField="charTypeInfo/output/searchZone"></input>
<input type="text" id="navOption" oraField="charTypeInfo/output/navOption"></input>
<table id="pkFields" oraList="charTypeInfo/output/pkFieldsList" summary="">
  <tbody>
    <tr>
      <td id="pkField" oraField="pkField"></td>
    </tr>
  </tbody>
</table>
</div>

<script type="text/javascript" defer="defer">
  var main;
  function oraAddRow(elem){
    var rowIndex = elem.parentNode.parentNode.rowIndex;
    var addedRow = parseInt(rowIndex) + 1;
  }

```

HTML Editor

```

1 <div style="display:none">
2   <input type="text" id="selectedCharacteristicType" oraField="charTypeInfo/input/characteristicType"></input>
3   <input type="text" id="selectedCharacteristicValue" oraField="charTypeInfo/input/characteristicValue"></input>
4   <input type="text" id="selectedAdhocCharacteristicValue" oraField="charTypeInfo/input/adhocCharValue"></input>
5   <input type="text" id="selectedFkValue1" oraField="charTypeInfo/input/fkValue1"></input>
6   <input type="text" id="selectedFkValue2" oraField="charTypeInfo/input/fkValue2"></input>
7   <input type="text" id="selectedFkValue3" oraField="charTypeInfo/input/fkValue3"></input>
8   <input type="text" id="selectedFkValue4" oraField="charTypeInfo/input/fkValue4"></input>
9   <input type="text" id="selectedFkValue5" oraField="charTypeInfo/input/fkValue5"></input>
10  <input type="text" id="charTypeFlag" oraField="charTypeInfo/output/charTypeFlg"></input>
11  <input type="text" id="charValInfo" oraField="charTypeInfo/output/charValInfo"></input>
12  <input type="text" id="fkRefSearchZone" oraField="charTypeInfo/output/searchZone"></input>
13  <input type="text" id="navOption" oraField="charTypeInfo/output/navOption"></input>
14  <table id="pkFields" oraList="charTypeInfo/output/pkFieldsList" summary="">
15    <tbody>
16      <tr>
17        <td id="pkField" oraField="pkField"></td>
18      </tr>
19    </tbody>
20  </table>
21</div>
22
23<script type="text/javascript" defer="defer">
24  var main;
25  function oraAddRow(elem){
26    var rowIndex = elem.parentNode.parentNode.rowIndex;
27    var addedRow = parseInt(rowIndex) + 1;
28    var refRow = '';
29    var tableId = elem.parentNode.parentNode.parentNode.id;

```

22C

Test UI Map

Config Tools: Data Explorer Improvements

Refactor Data Explorers

- Fix several minor issues
- Improve performance, particularly with large datasets
- Improve accessibility

Business Object Query

Main

Add

Business Object Search

SEARCH BY Business Object Information ▾

BUSINESS OBJECT W1

DESCRIPTION %activity%

DETAILED DESCRIPTION

MAINTENANCE OBJECT

Search

Hide Filters FILTERS: BUSINESS OBJECT W1, DESCRIPTION activity

	BUSINESS OBJECT	DESCRIPTION	MAINTENANCE OBJECT	DETAILED DESCRIPTION
1	W1-ActivityCompletionEventType	Create Specific Activity ⓘ	Completion Event Type	This BO is designed to create a field activity. The field activity type to create must be identifie ...
2	W1-ActivityComplInboundComm	Activity Completion Inbound Communication ⓘ	Inbound Communication	This BO is designed to process an inbound message and complete a field activity. The field activity ...
3	W1-ActivityEquipRequirement	Equipment for Activity ⓘ	Activity Resource Requirement	
4	W1-ActivityGenerator	Activity Generator Root ⓘ	Work Order	Root BO to contain common elements and algorithms for activity generators. This BO cannot be refere ...

New Framework Training Material

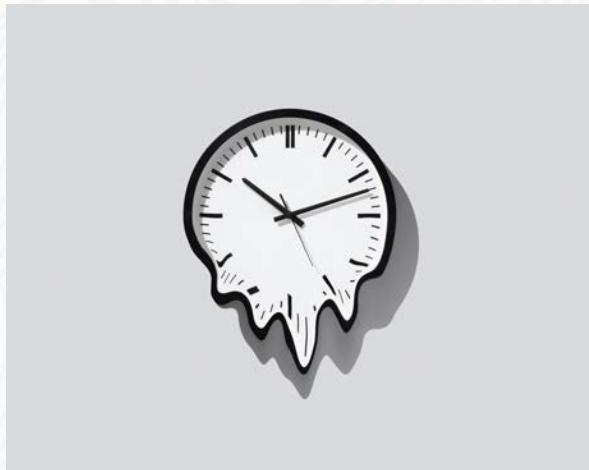
New materials will take a “Cookbook” approach, smaller units addressing specific requests

Technical Operations and Technical Configuration materials are now available via Oracle Video Hub

No costs, No login required
(unless you want progress to be recorded)

<https://videohub.oracle.com>

<https://blogs.oracle.com/utilities/post/tech-sessions>



What's up next

Upcoming Batch Improvements

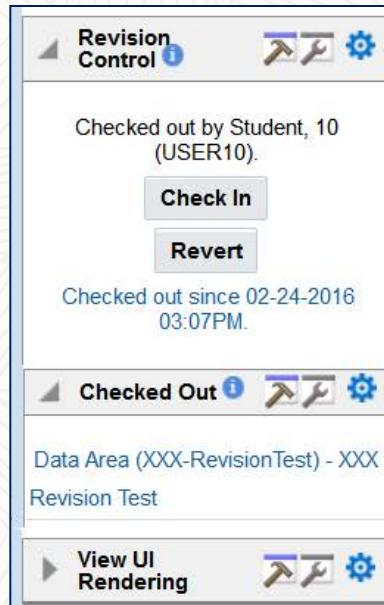
- Batch processes assigned Service Names to be used by DB Resource Manager
- Improved Health Check and Batch Level of Service (Performance improvements)
- New batch scheduler (available 22C, actively migrating customers) **(SaaS)**
- Stuck thread detection
- Continuous Task Processing for ILM, GDE jobs (“daemons” that must be run in the background) **(SaaS)**
 - Replace Continuous Task Processing with work streaming **(SaaS)**

Always-on application auditing

Applicable to all Admin and Config objects.

We are still reviewing options:

1. Use an automated form of revision control:



2. Reform the built in Audit features.

- It currently doesn't handle CLOBs well.



Refresh of UI Framework

Replacing our UI gadgets with Oracle Redwood-based OJet Components and Page Templates

The image displays a collage of screenshots illustrating the refresh of the Oracle UI framework, showing the transition from traditional gadgets to modern OJet components and Page Templates.

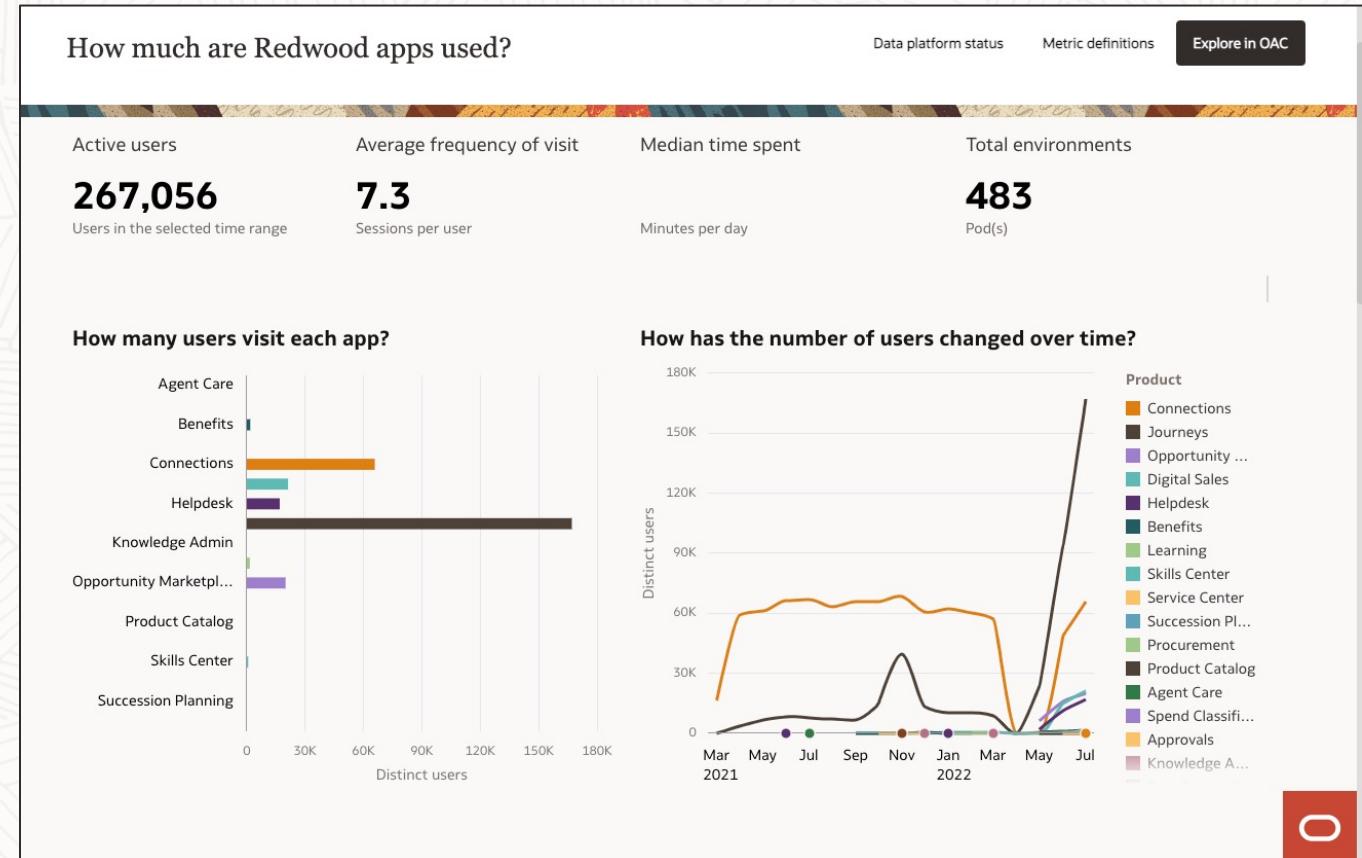
- Top Left:** A desktop browser view of an invoice page. The URL is <https://www.Oracle.com/Invoices>. The page shows an invoice for PO Number 910591622, Business Unit Supremo-US, Supplier Timber Professional Care, Due Date 2/19/2020, and Invoice Amount 76,672.42. It includes sections for Purchase Order Number, Supplier Site Address, Invoice Number, Invoice Date, and Legal Entity.
- Top Center:** A modal window titled "Copy Values" from a PDF titled "timberpro_invoice_6_30_2020.pdf". It instructs users to "Select the input field you wish to fill. On the invoice image, double-click on the value to copy it over to the selected form field."
- Top Right:** A detailed view of an "INVOICE" page. It shows the header "REMIT TO: Timber Professional Care, Homeoville, IL 60695-0002, SUND. No. 01-532-7731", the "SOLD-TO PARTY" section (ERON CLUB 123 Main St, Allentown, PA 18062), and the body of the invoice with a photo of Amy Barlett. The invoice amount is 76,672.42 USD.
- Middle Right:** A "Work details" form. It includes sections for "Job Type" (radio buttons for "Create new work definition" and "Create from existing work definition"), "Product" (a table with columns for Item, UOM, Stock No, and a dropdown for Structure Item Type "Standard"), "Completion Subinventory" (dropdown "Completed"), "Completion Locator" (dropdown), "Structure Name" (dropdown "Production"), and a checkbox for "Track serial number". The description field contains the text "Vision Slimline 5100 Tablet, 16 GB, 8" Display".
- Bottom Right:** A mobile phone screen showing the same "Work details" form, demonstrating the responsive design of the Redwood-based UI.

Add Telemetry to SaaS

Redwood Telemetry integration will allow collect data about how our systems are being used

Redwood Signals integration provides insights into those activities

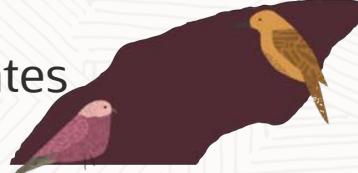
Your telemetry data is kept secure via an authenticated encrypted stream to the logging service, no PII collected



Refresh of UI Framework, Other Tasks

Updates to UI Hints and other UI Tools, currently a working POC.

This could include:

- Moving the UI tech stack from Knockout  to something more like React  (Preact)
- Updating UI dev tools like UI Hints to use the new Redwood Templates 
- Develop a drag-n-drop  version of UI Hints
- Improve Search technology to behave more like "smart searches" or Open Search 

Config Tools: Improved Upgrade Tools: identify changes, auto-testing

Extensions Dashboard
released in 22C,
enhancements coming

The screenshot shows the Oracle Extensions Dashboard. The main title is 'Extensions Dashboard' with a 'Main' tab selected. The 'Extensions Summary' table lists various maintenance objects and their counts:

Maintenance Object	Count
Algorithm Type	2
Application Service	55
Batch Control	1
Business Object	3
Inbound Web Service	1
Inbound Web Service Operation	8
Maintenance Object	2
Migration Plan	1
Migration Request	3
Outbound Message Type	72
Portal	1
Script	9
To Do Type	3
XAI Inbound Service	1

The 'Extension Entities' section shows a table with filters for 'Maintenance Object Maintenance Object (MAIN OBJ)'. It lists 'Activity (W1)' as the entity, with primary key 'W1-ACT' and extended status 'Yes'. Another row for 'Environment Reference' is also shown.

Entity	Primary Keys	Extended
Activity (W1)	W1-ACT	Yes
Environment Reference	ENV REF	

The 'Extension Details' section shows a table with filters for 'Maintenance Object Maintenance Object (MAIN OBJ), Primary Key 1 W1-ACT'. It lists a single row for 'Maintenance Object Option' with key 1 'W1-ACT' and key 2 'F1BP', key 3 '71', key 4 'F1SY', and key 5 empty.

Table	Key 1	Key 2	Key 3	Key 4	Key 5
Maintenance Object Option	W1-ACT	F1BP	71	F1SY	

We plan to build more unit testing tools, e.g.:

- automatic Unit Testing, e.g., to test Scripts, Groovy at check-in, similar to JUnit
- better UI testing tools
- closer integration of UTA Test Flows in development and test environments

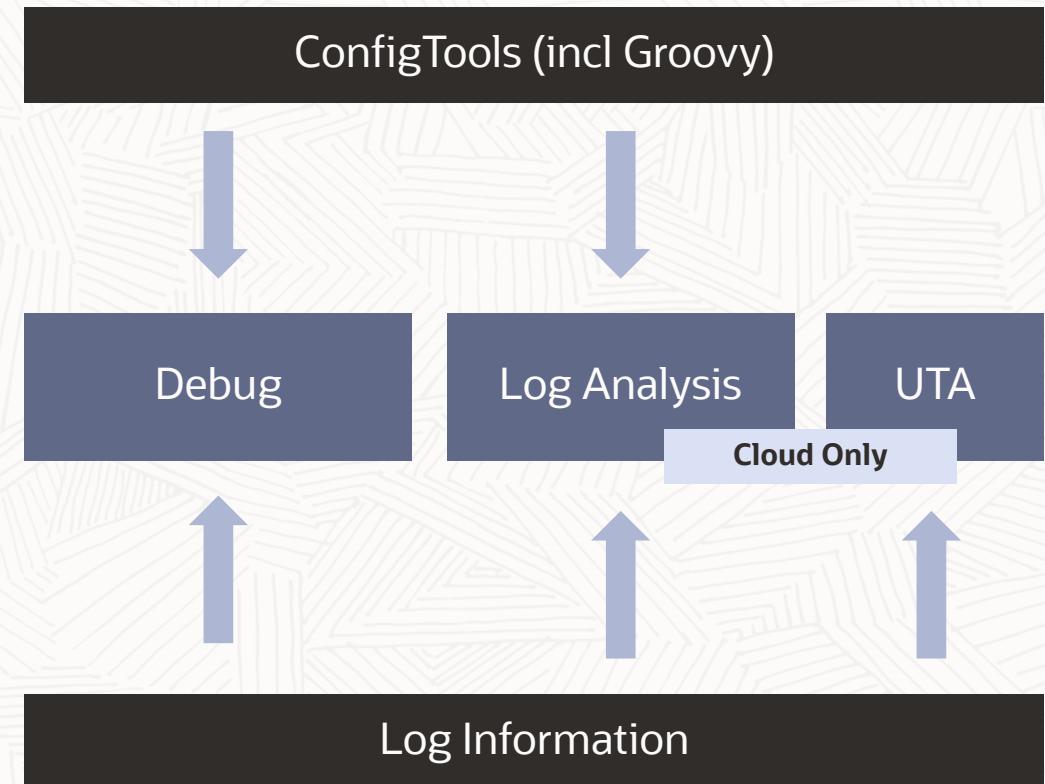
Config Tools: Improvements to Diagnostics and Debugging

Debug Capabilities

- Improvements to debug information for developers
- Debugging within the developer experience to diagnose issues

Improved Log Analysis

- Exposing a summary of the logging to the customers via *Cloud Service Foundation*
- Information is available to developers and also via results analysis in Oracle Utilities Testing Accelerator
- This information may be also made available to other log analysis services



Make Use of Previously Released Tags

Wide Range of Uses

- Security Tagging to simplify the setup of roles and permissions in the Menu Security Portal
- **ConfigTools** tagging to segment feature sets
 - *"What are all the objects related to my project?"*
- Batch tagging for functional level reporting rather than job level reporting
 - *"How did payment processing perform last night?"*
- **CMA** migration by tag
 - *"Migrate all objects tagged with X"*
- Search by tag to find information
- Tag cloud integration (for identifying popular parts of the product).
- **Test Data Migration** by tag
 - *"Migrate all the accounts with this tag"*
- Tag test records for the **Utilities Testing Accelerator**

Other Config Tools and SDK Improvements

Improve the efficiency and robustness of our SDK and the No Code / Low Code Config Tools

This could include things like:

- Run SDK on a Linux machine
- Support desktop IDEs for Groovy development, integrated with dev environments (SaaS and On-premise)
- Deeper integration of Revision Control, including compare feature
- Code / Metadata branching and merging
- Support for external code repositories, such a GIT
 - Keep in mind that most of our development artifacts are in Metadata
- Improve our use of Code Mirror (already done for HTML)
- Fix Advanced Script Debugging in SaaS

Security: Encrypting and Signing Interface Files

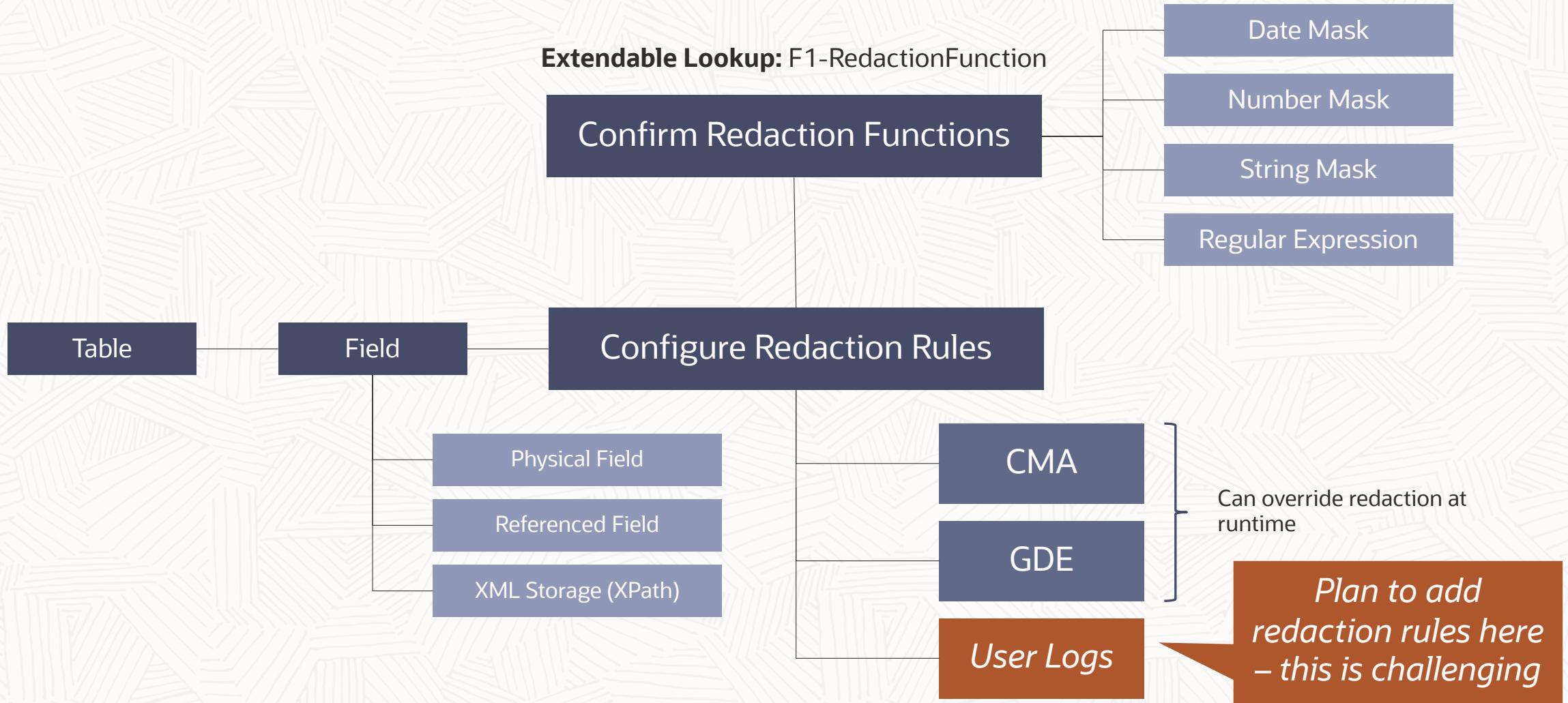
We now support 4 types of Key Rings

- **RSA Signature key pair** – generates RSA public and private key pair and stores it in PEM format – used for accessing Object Storage and Redirection (DSS masquerading)
- **OAuth Keys** – used to capture client ID and secret for authentication on outbound messages
- **Encryption Key Pair** – used for decryption / signing when the implementation owns the key and shares the public key with a third party. It uses PGP encryption.
- **Public Encryption Key** – used to capture the public key of a third party. Used to encrypt and recognize a third party's signature

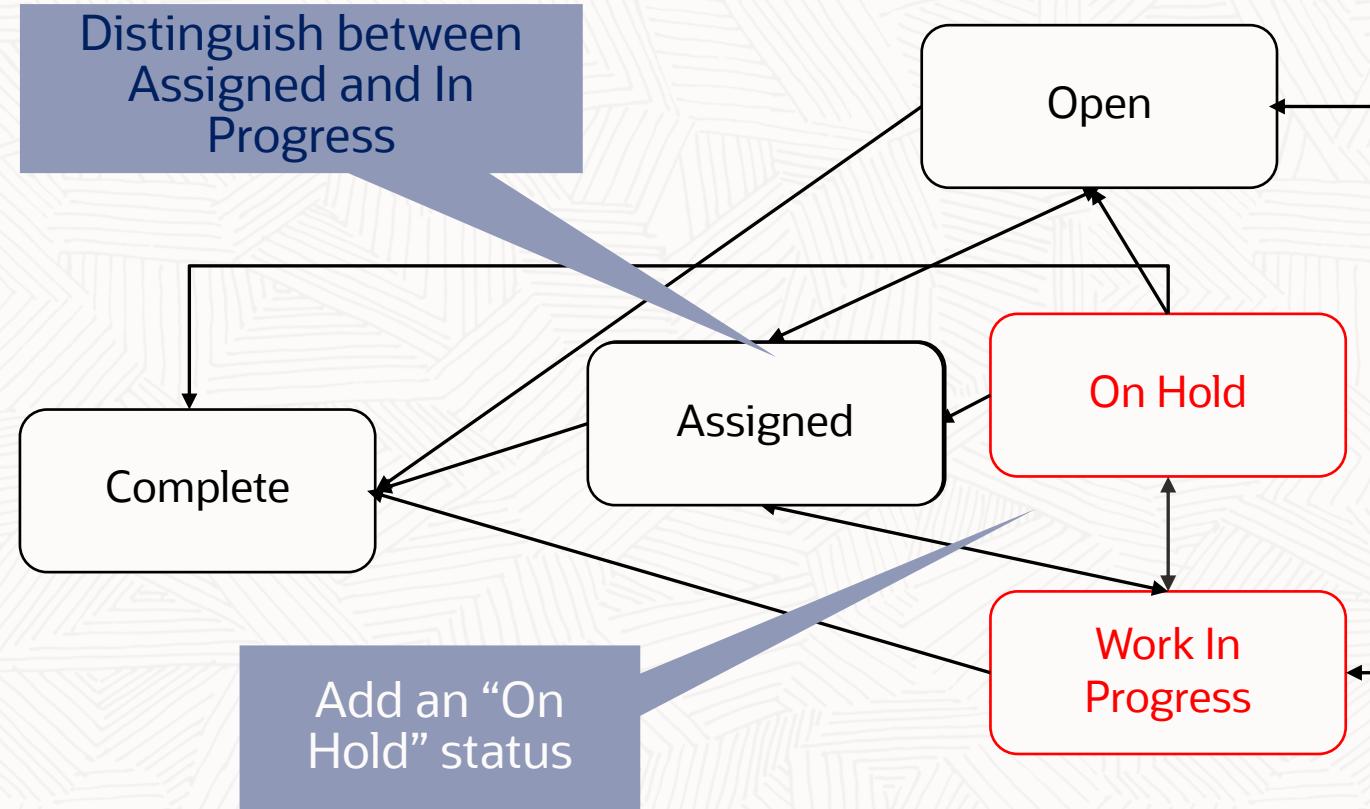


In a subsequent release we will support updates to batch processes that export or upload to use the key pairs to encrypt and sign files

Security: Masking PII in logs



Updating the ToDo State Model



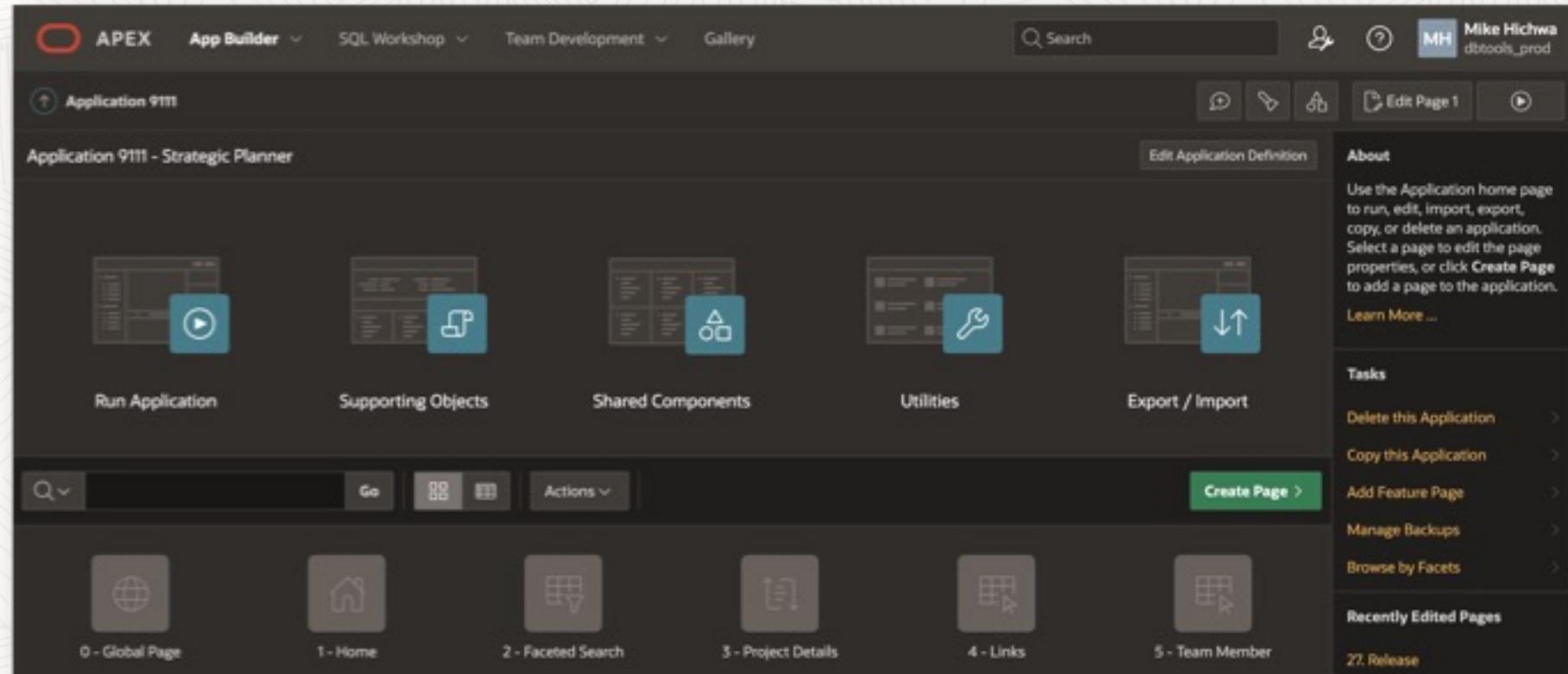
APEX "Integration"

APEX is a low code app dev framework (since 2004)

Included with the Oracle Autonomous Database and all other Database distributions

Available free in OCI and on premises with Oracle XE

E&W are working on a POC to develop a guidance for customers to use APEX for *specific use cases*



Utilities Testing Accelerator

Delivered:

- **Updated dashboard with basic analytics**
- **Redwood GUI**
- Support for embedded test flow documentation
- A central container for flow's input variables
- User time zone support
- **Flow test data management through spreadsheets**
- Open API UTA REST services for flow execution and more

Planned

- **Record a test flow by watching a user interact with the system**
- Enhanced summary report
- **New flow pause-poll-resume option to support end-end integration scenarios.**
- On-premise LDAP support
- **GUI based test data randomizer**
- GUI based component validations
- Improved REST support
- Improved navigation to and from flow subroutines
- Flow execution scheduler

Thank you





Oracle Energy and Water
Customer Edge
Conference

Enterprise SaaS

Strategy & Roadmap

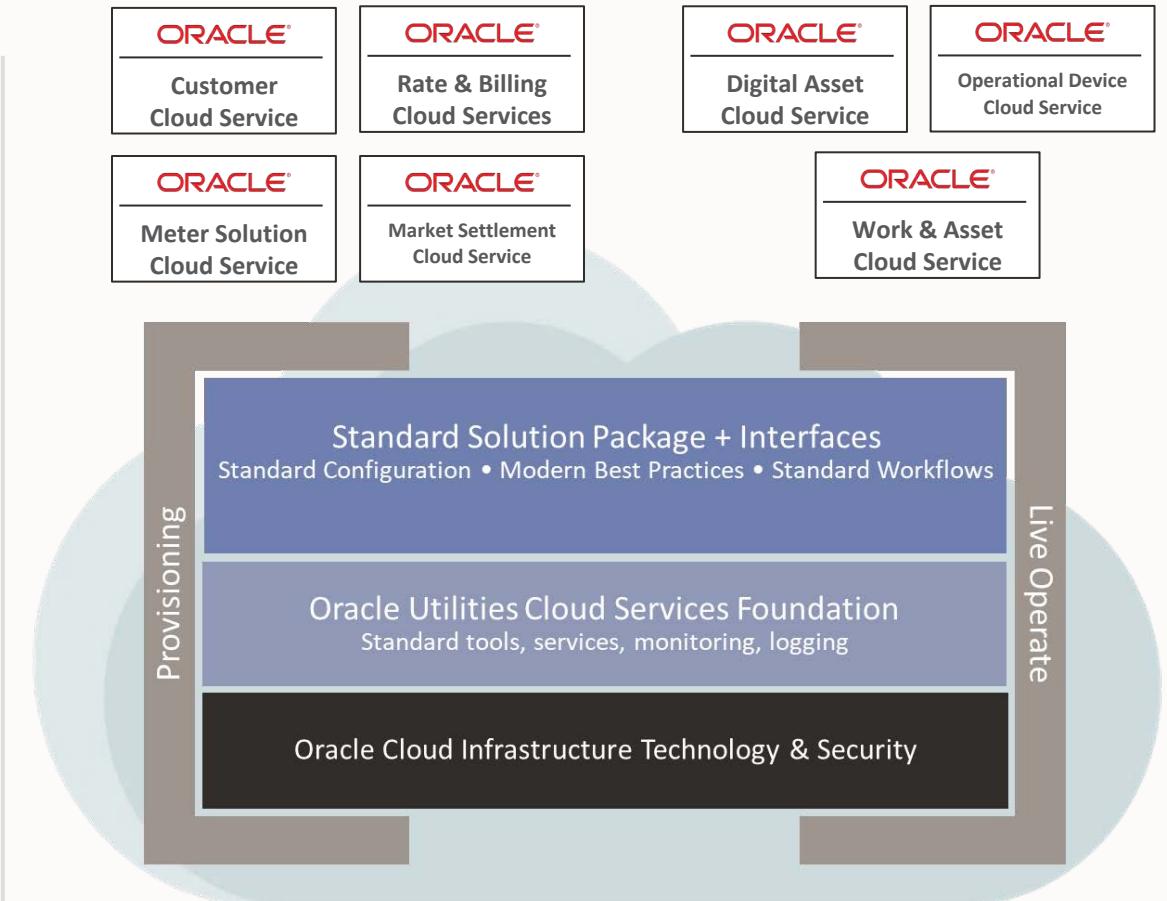
Brian Michel
Oracle Energy and Water Product Management
March 14, 2023



Brian Michel
Cloud Product Management

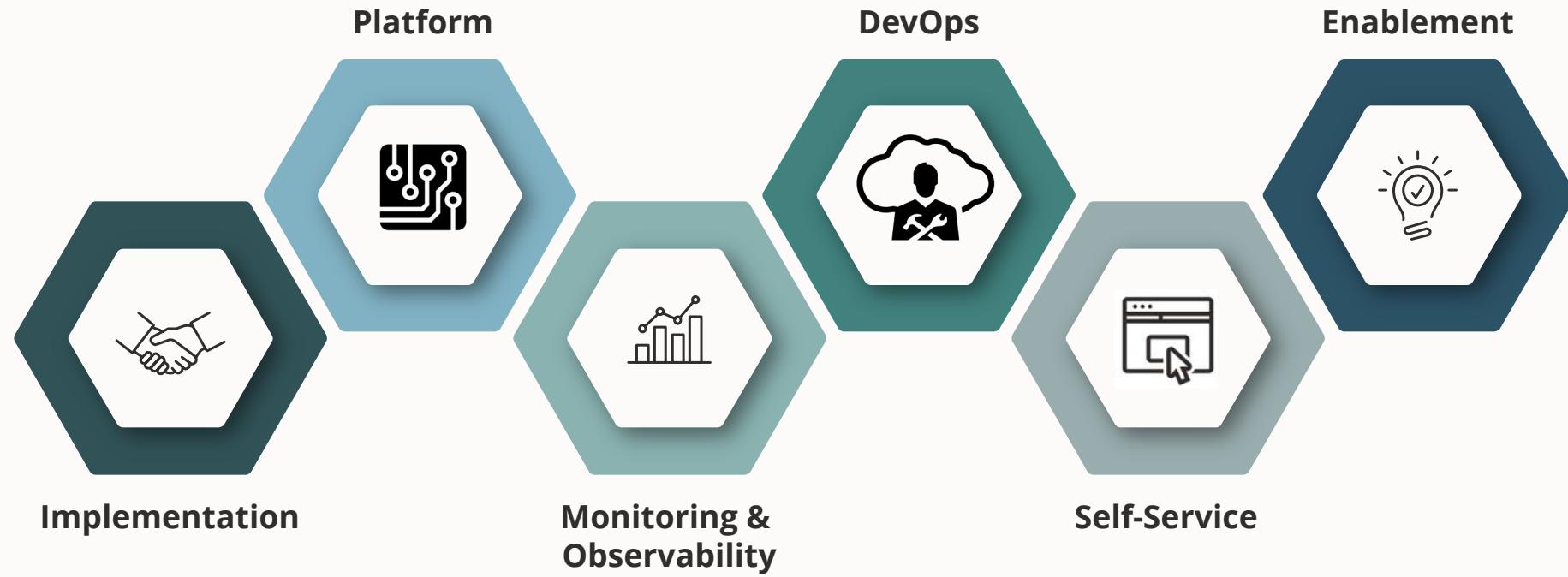
Energy and Water: Oracle Utilities Enterprise SaaS

Provide tools and services that will allow utilities to migrate to, implement and operate mission critical enterprise software as easily, safely, efficiently, and as cost effectively as possible.



Reduce Cost, Reduce Risk, Unlock Innovation

Enterprise SaaS Investment Themes

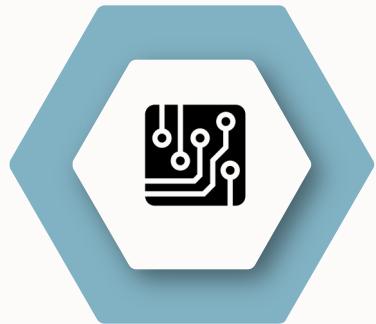


Enterprise SaaS Investment Themes



Implementation

Improved tools & capabilities to directly support customers during the implementation phase



Platform

Continual improvement of security, performance, scalability, stability, availability and compliance



Monitoring & Observability

Enhanced visibility of online, batch and integration workloads for customers and DevOps



DevOps

Improved tooling & automation. Faster turn-around times, and an enhanced range of services



Self-Service

Provide customers with more control and allow them to do more for themselves (on their schedule)



Enablement

Continue to improve documentation, release readiness and training materials to ensure project teams have what they need to be successful

Recent Highlights

Achievements from the last few releases...

Recent Highlights

General Service Improvements

- ✓ Service Availability increased to 99.9%
- ✓ Easier access to contract documents
- ✓ Phoenix Availability

Find a document

Select the product, country, or language to view the applicable Oracle Cloud Services contracts and related documents.

Product: Industry - Utilities Country: United States Language: English View documents

Cloud Service Descriptions

PDF Oracle Energy and Water Cloud Services Download View

Disaster Recovery and Service Availability

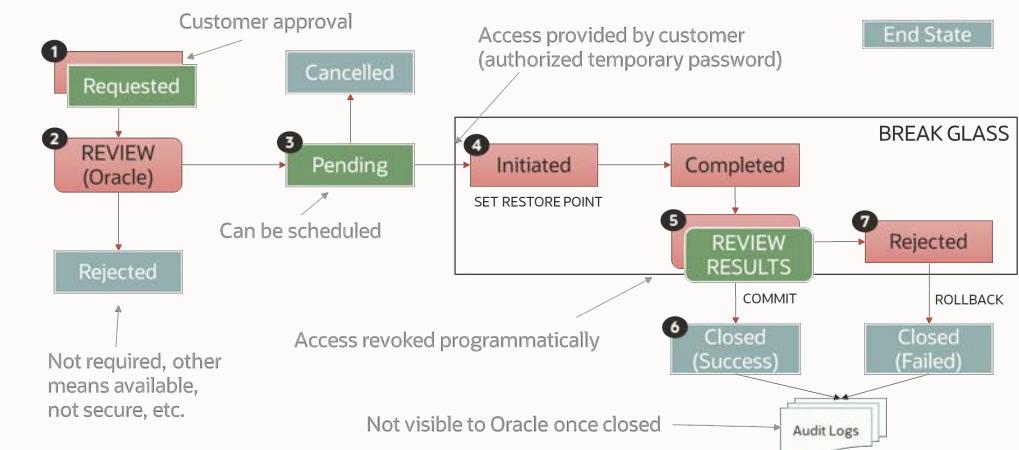
As described in the Oracle Global Business Unit Cloud Services Pillar Document, this Oracle Cloud Service has the following Recovery Time and Recovery Point Objectives and Target Service Availability Level for the Production Environment:

RECOVERY TIME OBJECTIVE (RTO)	RECOVERY POINT OBJECTIVE (RPO)	TARGET SERVICE AVAILABILITY LEVEL
12 hours	1 hour	99.9%

Break Glass Workflow

- ✓ Customer controlled access to data (including approvals)
- ✓ Scheduled Break Glass Events
- ✓ Detailed audit reports of any data access/changes

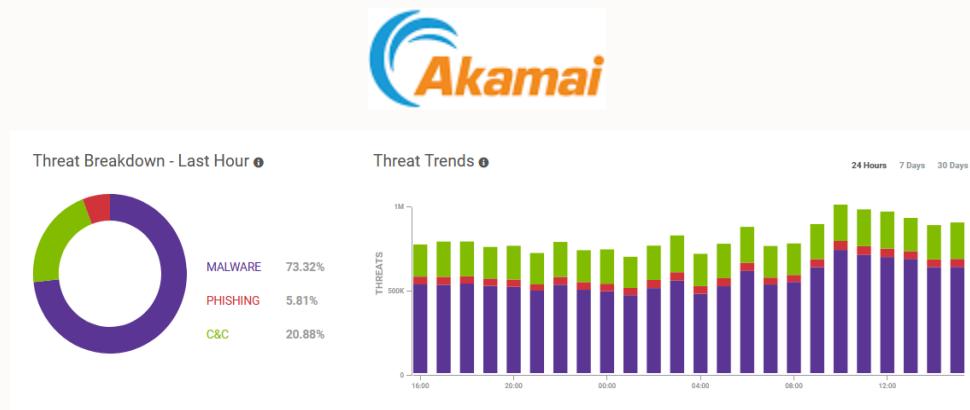
Break Glass Event Workflow



Recent Highlights

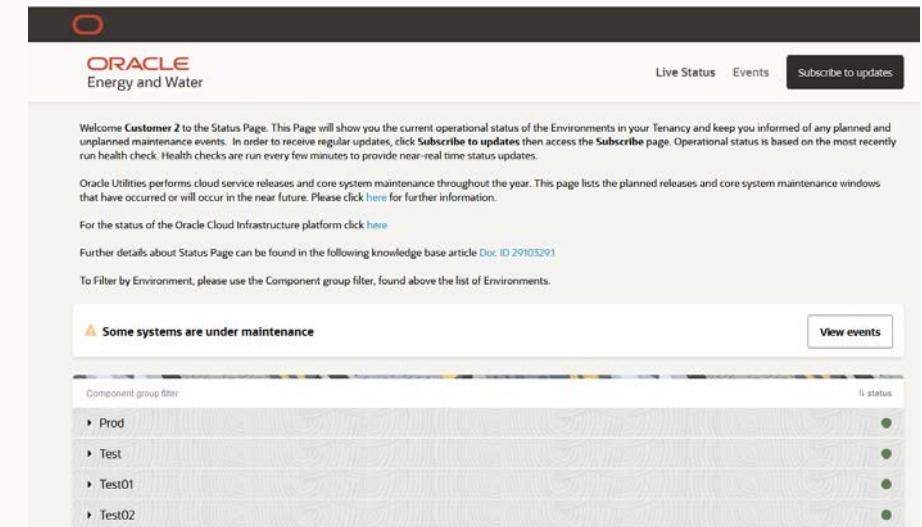
Akamai

- ✓ Edge protection included with cloud services:
 - Distributed Denial-of-Service (DDoS)
 - Web Application Firewall
 - In-browser threat protection
 - Bot management
 - Geo-fencing



Status Page

- ✓ Outage and maintenance status notifications
- ✓ Supports subscription via email
- ✓ Aligns with other Oracle services



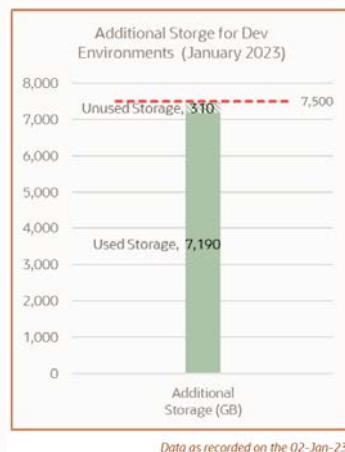
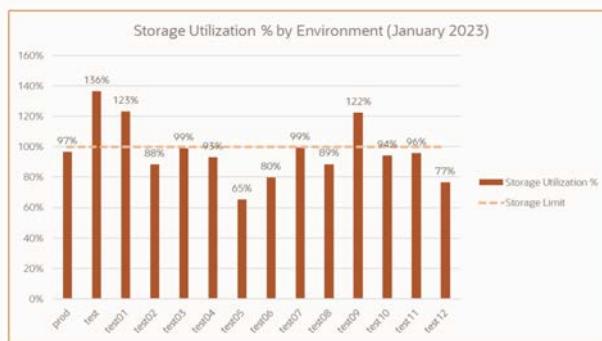
The screenshot of the Oracle Status Page shows the following interface elements:

- Header:** Oracle Energy and Water, with links for Live Status, Events, and Subscribe to updates.
- Welcome Message:** Welcome Customer 2 to the Status Page. This Page will show you the current operational status of the Environments in your Tenancy and keep you informed of any planned and unplanned maintenance events. In order to receive regular updates, click [Subscribe to updates](#) then access the [Subscribe](#) page. Operational status is based on the most recently run health check. Health checks are run every few minutes to provide near-real time status updates.
- Informational Text:** Oracle Utilities performs cloud service releases and core system maintenance throughout the year. This page lists the planned releases and core system maintenance windows that have occurred or will occur in the near future. Please click [here](#) for further information.
- Links:** For the status of the Oracle Cloud Infrastructure platform click [here](#). Further details about Status Page can be found in the following knowledge base article [Doc ID 29105291](#).
- Filtering:** To Filter by Environment, please use the Component group filter, found above the list of Environments.
- Alert:** A yellow warning icon indicates "Some systems are under maintenance". A "View events" button is available to the right.
- Table:** A table showing the status of environments across component groups. The table includes columns for Component group filter, Environment, and Status. The 'Prod' group has a green status, while 'Test' and 'Test01' have grey status indicators.

Recent Highlights

DB Storage Reports

- ✓ Improved clarity on which environments are using more data storage
- ✓ Allows planning for additional data storage requirements
- ✓ Available via your CSM



Improved Operational Notifications

- ✓ Now includes detailed sizing information (batch threads, concurrent users, integration request capacity, etc)



Recent Highlights

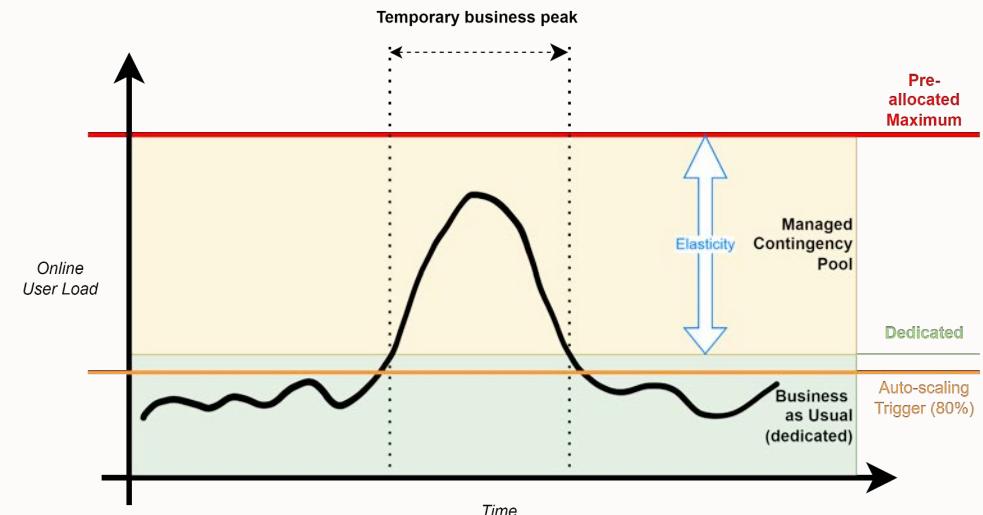
Data Refresh / Cloning Improvements

- ✓ Unified methodology
- ✓ Faster, more reliable data refreshes (clones)
- ✓ Pre-cursor to self-service cloning



Enhanced Online Auto-Scaling

- ✓ Dynamic elasticity for users and integrations
- ✓ Improved performance during peak periods of activity



Recent Highlights

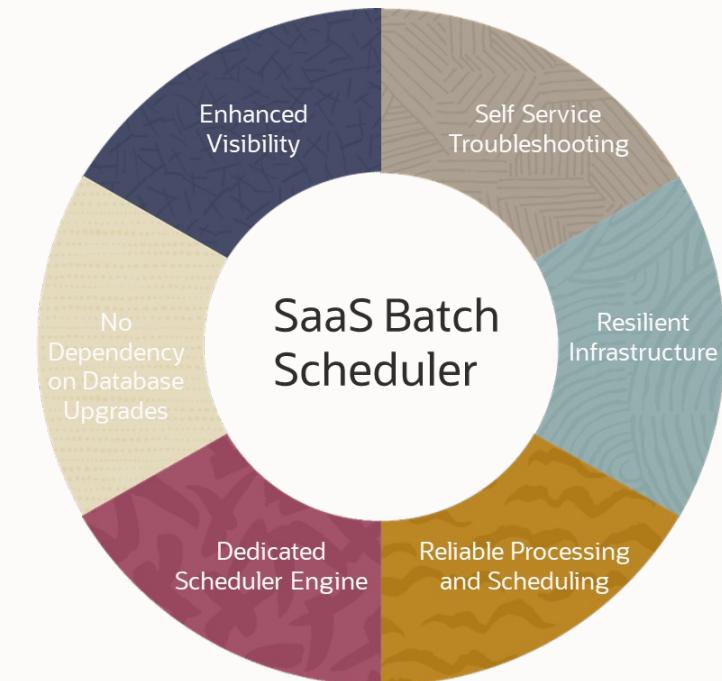
Autonomous DB

- ✓ Certified for all Enterprise SaaS services
- ✓ Reduced human interaction (safer, fewer mistakes)
- ✓ Improved DB elasticity & scalability (precursor for dynamic batch auto-scaling)



Batch Scheduler Improvements

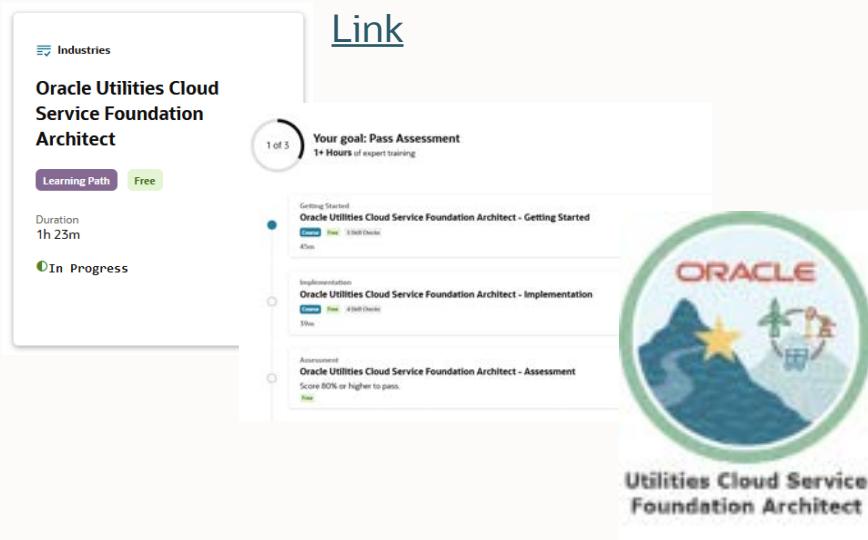
- ✓ Enhanced reliability & visibility
- ✓ Improved monitoring & troubleshooting



Recent Highlights

Learning Path: Oracle Utilities Cloud Service Foundation Architect

- ✓ Covers key concepts for Cloud Service Foundation Architects.
- ✓ Learn about security, batch processing and monitoring, Configuration Migration Assistant (CMA) and Information Lifecycle Management (ILM) and log analysis

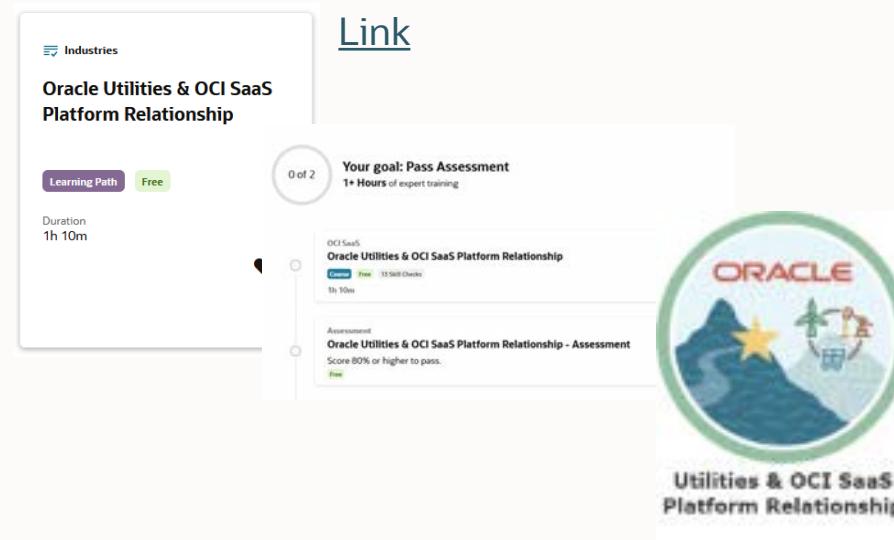


The screenshot shows the Oracle Utilities Cloud Service Foundation Architect Learning Path. It includes a summary card with the title, duration (1h 23m), and status (In Progress). The main content area displays three modules: 'Getting Started' (1 of 3), 'Implementation' (1 of 3), and 'Assessment' (1 of 3). Each module has a 'Start' button and a 'Skill Check' link. A large circular badge at the bottom right features the Oracle logo and the text 'Utilities Cloud Service Foundation Architect'.

[Link](#)

Learning Path: Oracle Utilities & OCI SaaS Platform Relationship

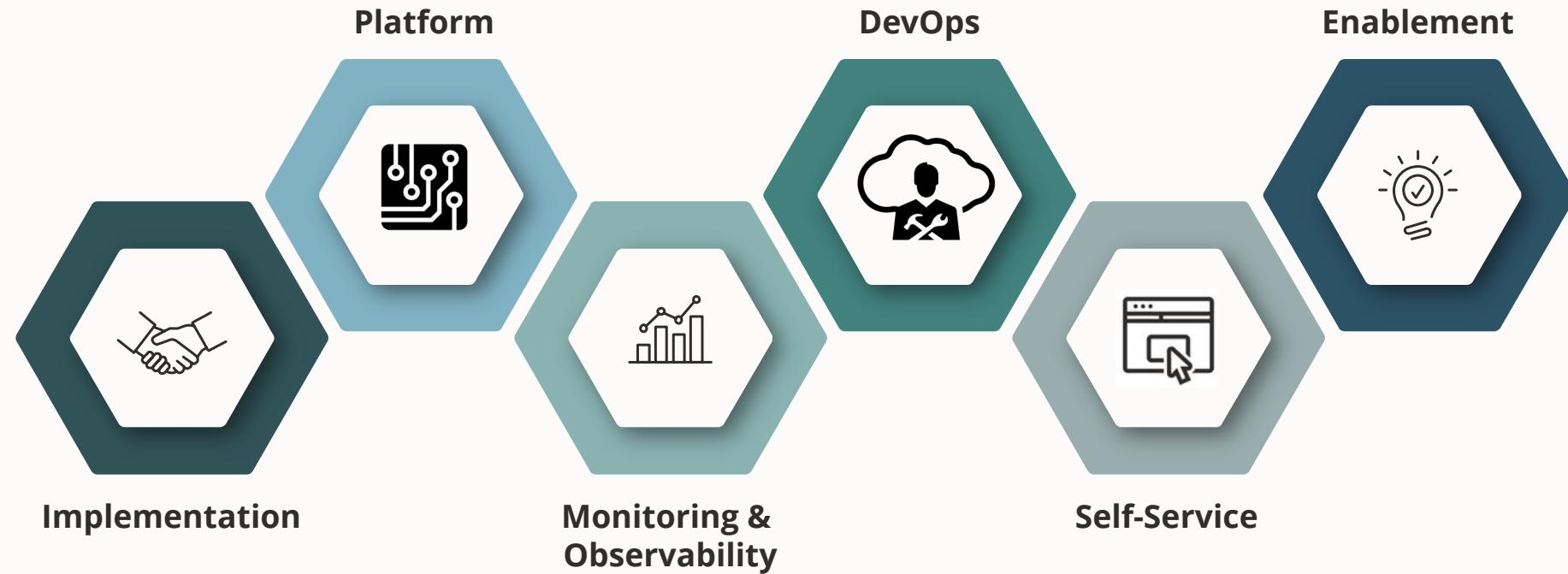
- ✓ Covers key concepts related to the Oracle Utilities applications and their relationship with the OCI SaaS platform
- ✓ Learn about monitoring, update policies, reporting, SQL Developer via ORDS, process automation, networking & integration



The screenshot shows the Oracle Utilities & OCI SaaS Platform Relationship Learning Path. It includes a summary card with the title, duration (1h 10m), and status (In Progress). The main content area displays two modules: 'OCI SaaS' (0 of 2) and 'Assessment' (0 of 1). Each module has a 'Start' button and a 'Skill Check' link. A large circular badge at the bottom right features the Oracle logo and the text 'Utilities & OCI SaaS Platform Relationship'.

[Link](#)

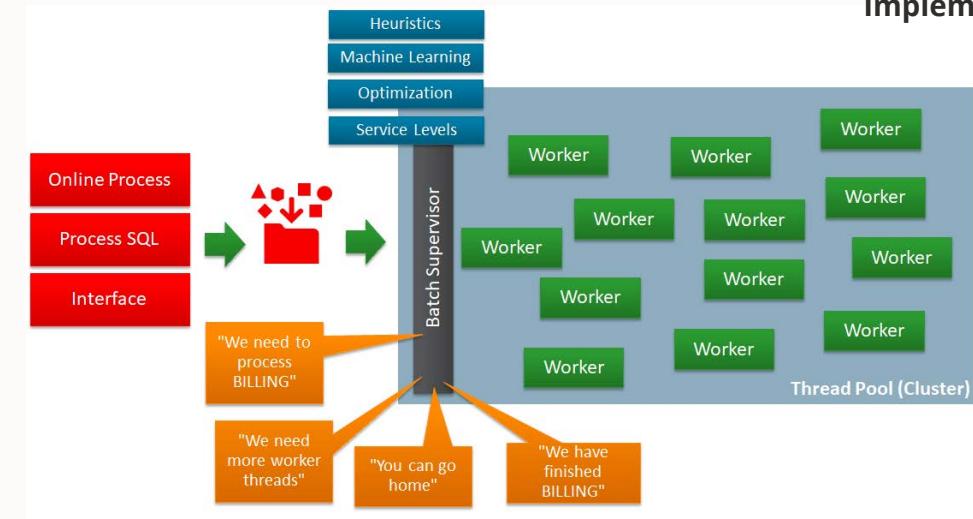
Enterprise SaaS Roadmap Focus Areas (next 12 months)



Implementation

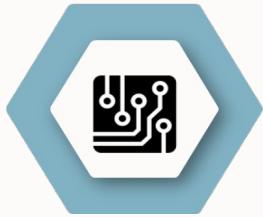
Next Generation Batch Infrastructure

- Scalable, nimble batch architecture
- Workload automatically divided up into workstreams
- Workers are dynamically allocated to process workstreams
- Improved monitoring:
 - Scale up / down
 - Predict ETA
 - Processing optimization
 - Better completion/error detection



Benefits:

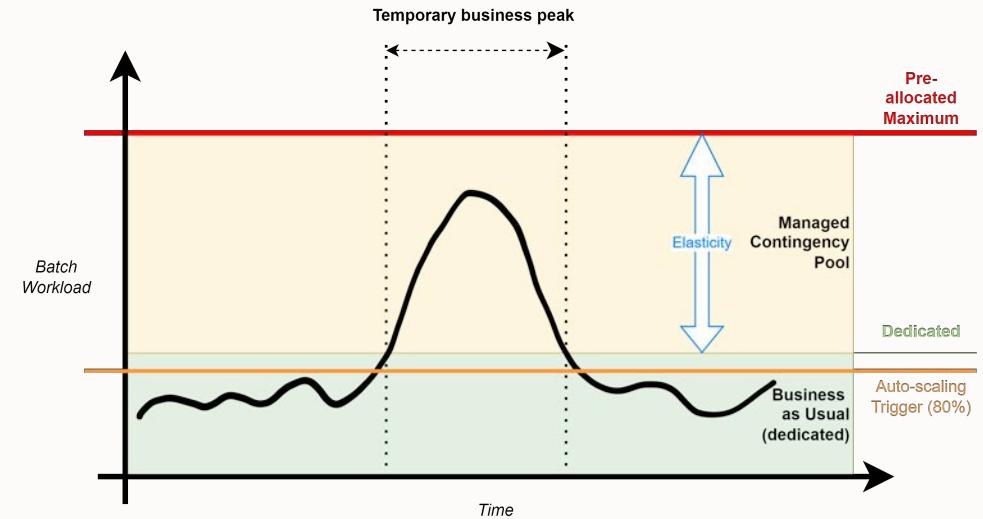
- ✓ Dynamic scaling based on workload
- ✓ Handles varying workloads
- ✓ Scale up/down based on heuristics & actual workload
- ✓ Enables catch-up / boost processing
- ✓ Greater visibility of processing
- ✓ Greater flexibility to run multiple jobs at once



Platform

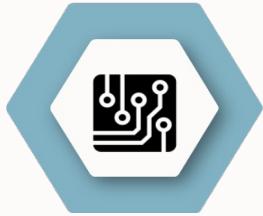
Improved Batch Scalability / Elasticity

- Leverage the next-gen batch infrastructure
- Automated scaling up/down of batch processing depending on workload
- Upper limits for effective resource management
- Lower limits to guarantee minimum resources



Benefits:

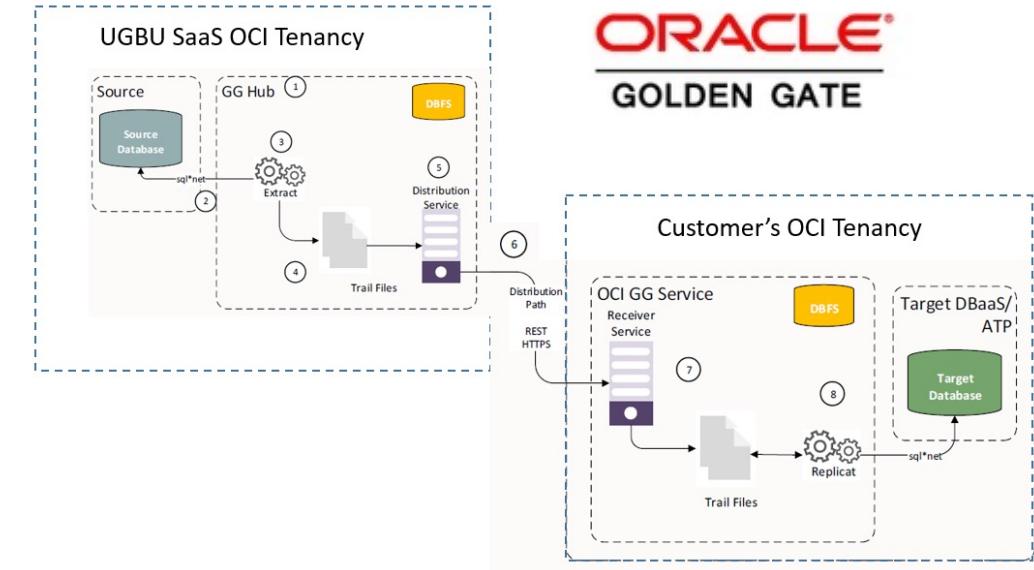
- ✓ Batch processing can scale up to leverage any additional, available resources
- ✓ Provides additional buffer for normal workload peaks
- ✓ Enabler for catch-up / boost processing (future)



Platform

SaaS to Customer Data Replication (Golden Gate)

- Replicate data from source (SaaS) environment to a PaaS hosted DB
- Initial and ongoing sync
- Production and (limited) non-production environments
- One-way (SaaS → Customer)
- Included in SaaS subscription



Benefits:

- ✓ Maintain local copies of SaaS data
- ✓ 100% in customer control – do what you like
- ✓ Enhanced reporting & data validation
- ✓ Enables high volume, data driven downstream processes

Monitoring

Security & Event Logging



- Unified data feed on security events for CASB and SIEM systems
- Sources:
 - **Identity Management**
 - User logins (successful, failed)
 - Password rule compliance & password changes,
 - Identity/access configuration changes, etc.
 - **Application access & auditing**
 - Application access changes (e.g. user group permissions)
 - Changes tracked by OUAF auditing (configurable)
 - OUAF auditing improvements
 - Document/data uploads



Benefits:

- ✓ Enhance your CASB and SIEM systems with data from OEW SaaS
- ✓ Common data formats
- ✓ Unified methodologies
- ✓ Easy integration



DevOps

Import External DB to SaaS

- Support for importing an external DB (e.g. C2M) into SaaS
 - Customer upgrades to a specific, well defined patch level on-premise (including conversion to C2M if required)
 - Perform DataPump export and uploads to Object Storage
 - DevOps load the export into a SaaS DB



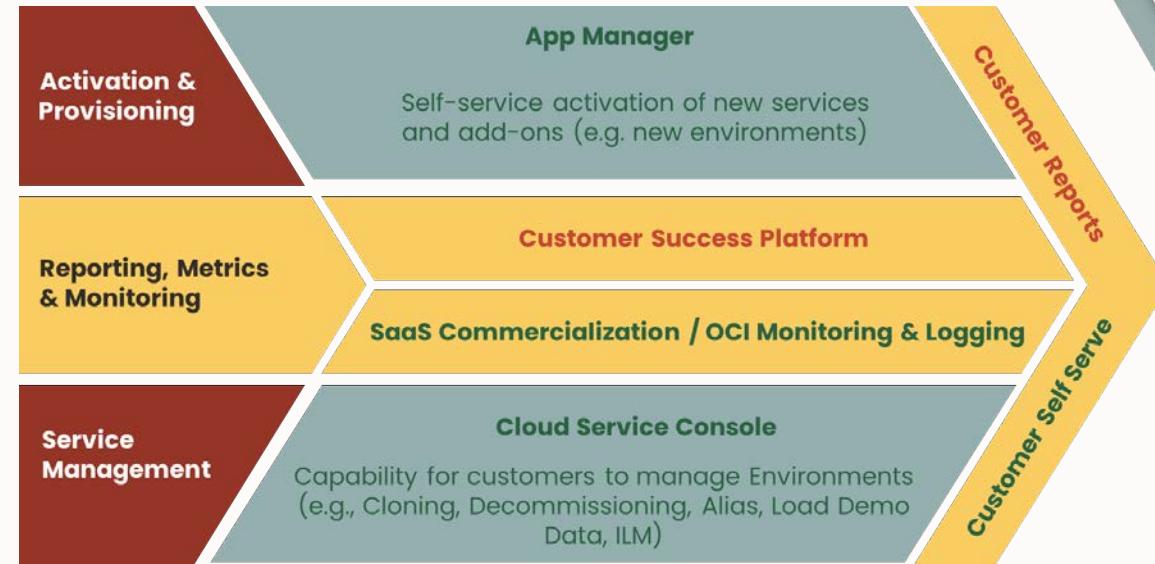
Benefits:

- ✓ Faster migration from on-prem to SaaS
- ✓ Customers perform pre-migration conversion work on-premise using their own tools/processes

Self Service

Service Manageability Improvements

- Improved activation and self-provisioning of services / additional environments
- Self-service reporting on DB storage usage, subscription information (usage), etc
- ILM portal for management of ILM processing, warnings, data purge (reports, approval, execution)
- Cloud Service Console...

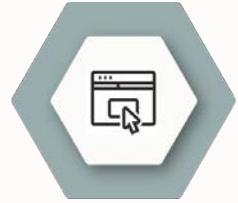


Benefits:

- ✓ Consistent experience across all Oracle services
- ✓ Manage your own additional environments/services
- ✓ One stop location for service/subscription information
- ✓ Consolidated self-service & improved manageability

Self Service

Cloud Service Console



Self-Service

- Timing extended to allow for better alignment with other Oracle services (unified look and feel)
- Provides self-service tool implementations that are *specific* to OEW Enterprise SaaS:
 - Environment patch / update controls
 - Create/Decommission (non-production)
 - Cloning
 - Factory reset
 - Lock/unlock
 - Load demo data
 - Restore point (set/restore)
 - Allow list management

The screenshot displays the Oracle Utilities Cloud Service Console interface. The top section, 'Service Instances (Environments) of your Customer Cloud Service', lists environments with columns for Code, Name, Alias, Provisioning Status, Provisioning Date, Version, and Notifications. The bottom section, 'Service Requests for your Customer Cloud Service', shows a search interface and a table of requests with columns for ID, Type, Status, Target Environment, Request Date/Time, User, and Additional Details.

Code	Name	Alias	Provisioning Status	Provisioning Date	Version	Notifications
DEV01	Development #1	Gold	Provisioned	September 7, 2020	20C Build 037 Patch: 123456	Request Pending
DEV	Development		Provisioned	September 2, 2020	20C Build 037 Patch: 123456	Temporary Lock
TEST	Test		Provisioned	September 2, 2020	20C Build 037 Patch: 123456	
PROD	Production		Provisioned	September 2, 2020	20C Build 038 Patch: 123457	Set Alias Set Lock Status Factory Reset

ID	Type	Status	Target Environment	Request Date/Time	User	Additional Details
126	Load Demo Data	Pending	Development #1	September 26, 2020 12:31pm	johnsmith@utilityCorp.com	Data Source: CCS 20C
125	Copy Data	In Progress	Development #2	September 25, 2020 11:06am	johnsmith@utilityCorp.com	Data Source: Development #3
124	Factory Reset	Completed	Test (Training)	September 23, 2020 10:17am	johnsmith@utilityCorp.com	Reset Option: View Details
123	Factory Reset	Cancelled	Development #1	September 21, 2020 11:06am	pmarshall@utilityCorp.com	Reset Option: Full

Benefits:

- ✓ Customers/projects control when environment activities are triggered
- ✓ Faster turnaround through automation & self-service
- ✓ Reduced reliance on SR based DevOps services

Self Service

Break Glass Bring Your Own Key (BYOK)

- Optionally choose between Oracle and Customer managed keys
- Extends Break Glass to allow for customer management of the TDE encryption keys
- Alignment with general Oracle direction (same service for OEW, Fusion SaaS, CX, etc)
- Key management tasks include:
 - Transition to/from customer managed keys
 - Key reset / customer specific rotation
 - Revocation
- Requires subscription to OCI Vault
- Comes with significant responsibilities and will require comprehensive key management procedures.



Benefits:

- ✓ Customer control over data encryption
- ✓ Ability to revoke all access (if required)
- ✓ Enhanced compliance with regulatory requirements (where applicable)



Enablement

Feedback Driven Documentation & Training

- Continual improvement of guided learning paths and materials
- Regularly updated “What’s New” and release readiness documentation
- Detailed enablement materials for new capabilities
- Improved partner (SI) enablement

The screenshot shows a collection of Oracle Utilities Customer Cloud Service resources:

- Cloud Readiness / Oracle Utilities Customer Cloud What's New**: A sidebar menu with sections for **22C** (Revision History, Overview), **22B** (Feature Summary, Utilities Common), **22A** (Utilities Testing Accelerator, Cloud Service Foundation), and **21C** (Customer, including sub-sections for Customers, Meter Solution, Smart Grid Gateway, Utilities Application Framework, and System Wide). It also includes an **IMPORTANT Actions and Considerations** section.
- Oracle Utilities Customer Cloud Service**: A main content area with a brief description: "The Oracle Utilities Customer Cloud Service is a customer care, service order, metering, and billing system for traditional scalar devices and billing processes. It is designed for utilities of all sizes, supports one to many utility service types, and handles the complexities associated with a utility's business processes." Below this is a "Release 22C (Latest)" dropdown.
- Get Started with Customer Cloud Service**: A section with a "User Guides" icon and a "What's New" icon.
- User Guides**: A list including **Overview Guide**, **Business User Guide**, and **Administrative User Guide**.
- What's New**: A list including **Maintenance Pack Notes** and **Release Readiness**.

Benefits:

- ✓ Quickly learn about new features & functions
- ✓ Leverage best practices
- ✓ Ensure your project teams have the skills and knowledge required to be successful
- ✓ Common experience (for all Oracle services)

Thank you



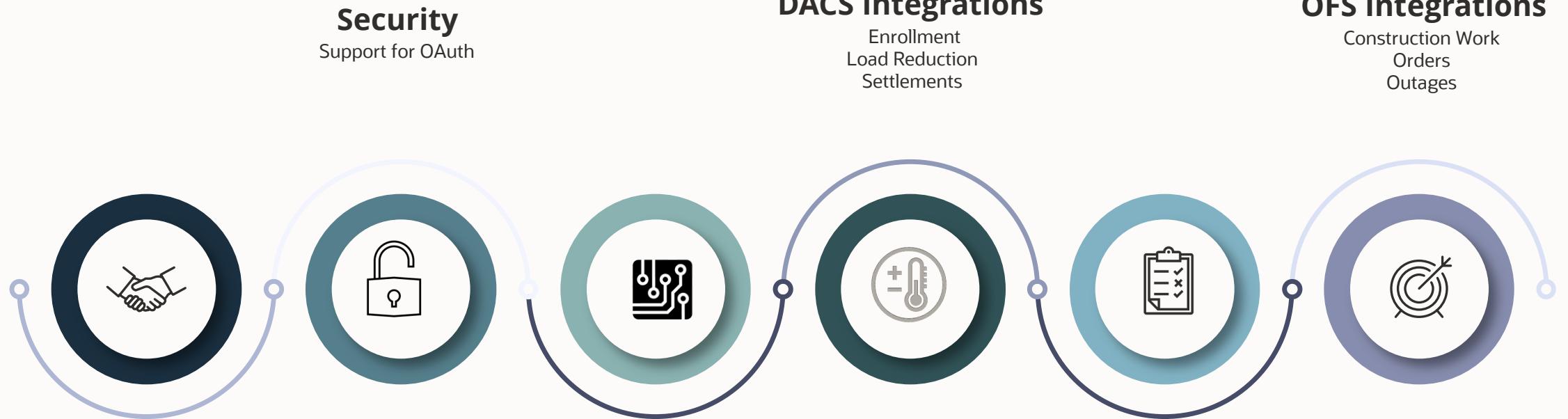


Oracle Utilities Application Framework Roadmap

Integrations Update

Vicky Feldman
Director Product Management

Integrations Focus Area



OIC Gen 3

Transition to OIC 3

Utility Adapter

Support Attachments

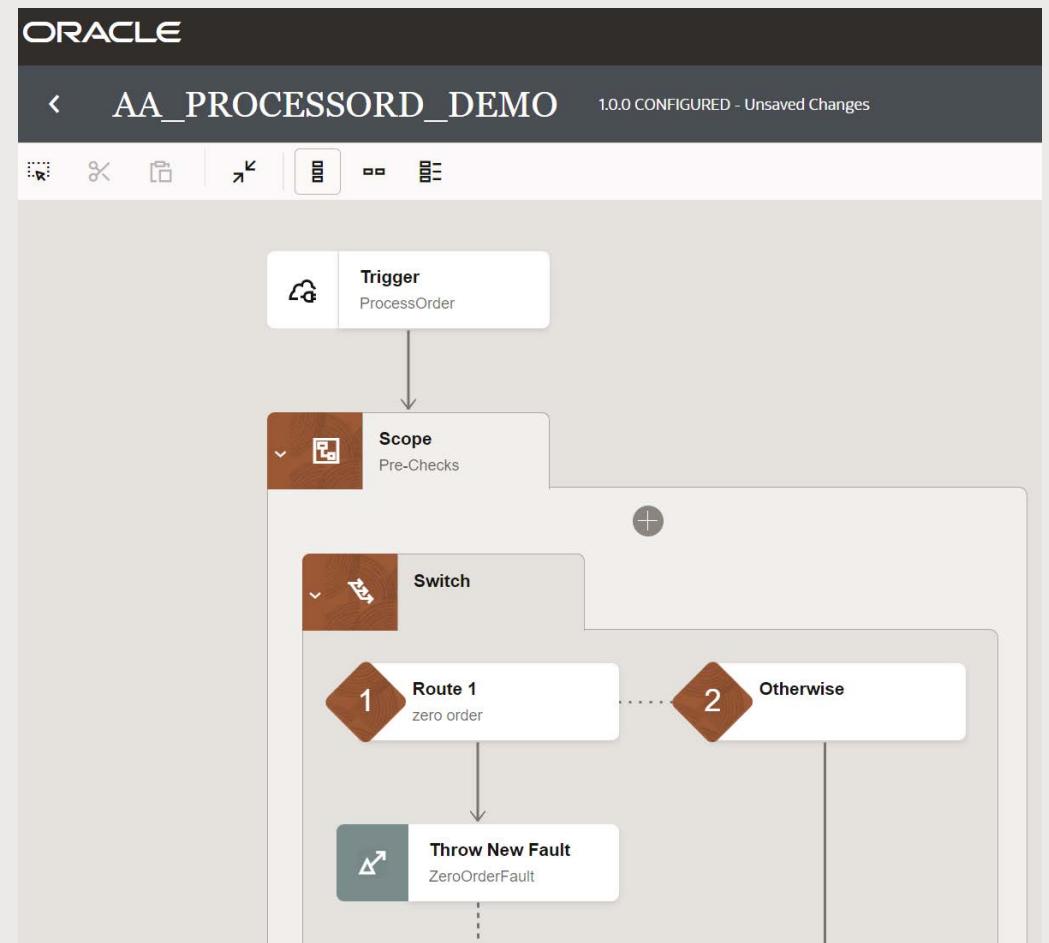
ERP Integrations

WACS-Fixed Assets
WACS-Project Management

Oracle Integration 3

Connect applications and automate end-to-end business processes with OIC Gen 3

- **Benefits:**
 - New look & feel
 - Loosely coupled components
 - Better performance
 - Improved metrics and observability
 - Easier to scale
 - Improved developer experience
- **New features and innovation**
 - Projects
 - Resource Based Access Control
 - Caching
 - Parallel Processing etc.



OIC Utility Adapter – OAuth Support

Released

OAuth support - no username/psw for REST inbound into OUAF

OAuth support - no username/psw for REST inbound into NMS

Coming

OAuth support - no username/psw for REST outbound from OUAF

OAuth support - no username/psw for REST outbound from NMS

OAuth support - no username/psw for SOAP inbound into OUAF

OAuth support - no username/psw for SOAP outbound from OUAF

Support attachments within Oracle Utilities OIC Adapter

Coming Soon

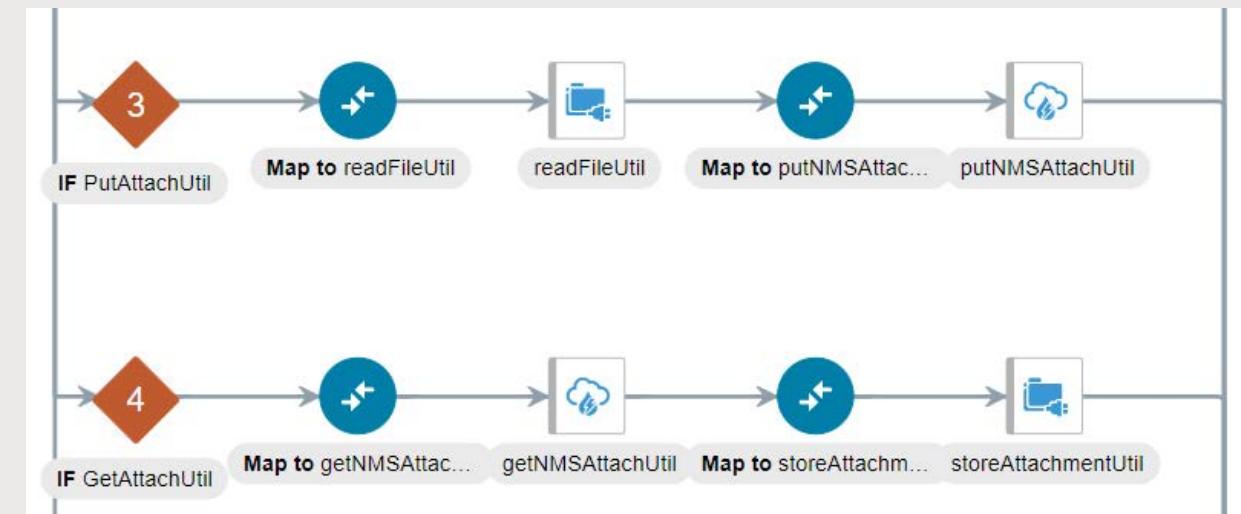
Ability to send files within REST payload

• Binary Attachments

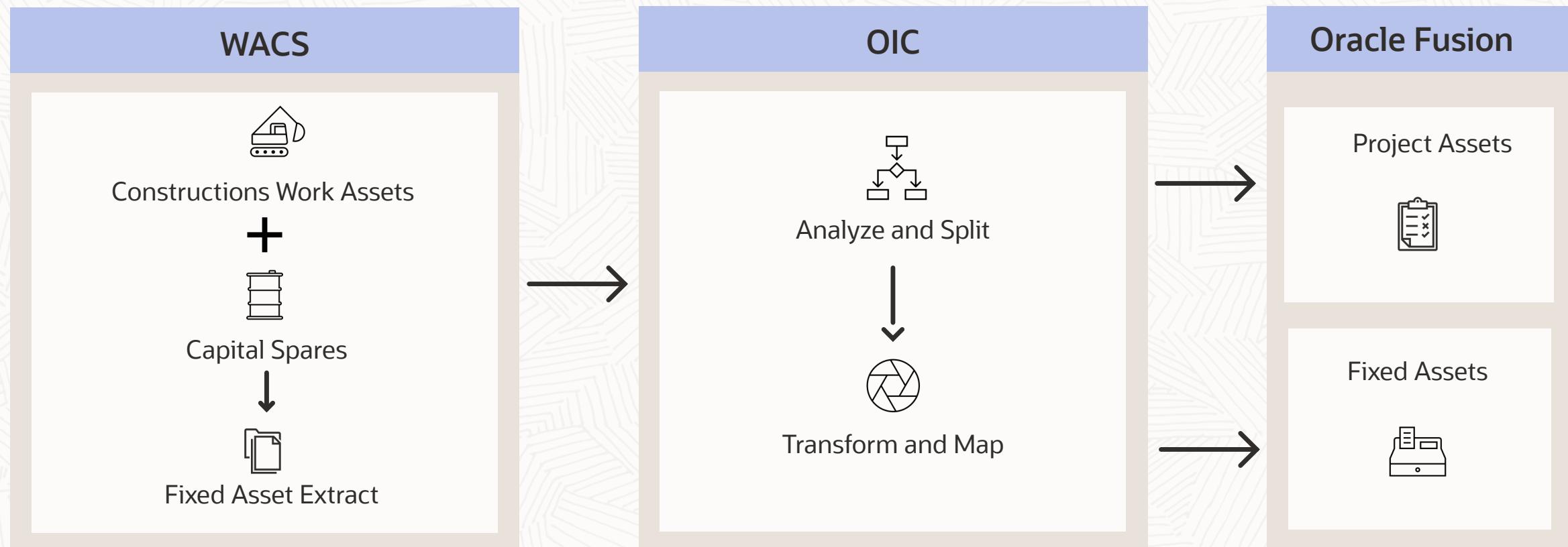
- supports various types, such as such as - image, word, spreadsheet,
- for example, passing activities attachments from NMS to OFS

• Multipart Attachments

- multipart allows to send different data types (primitive, object, files, etc.) in the same payload
- for example, passing device reservation CSV file from DERMS to DACS



WACS-Fixed Asset Integration

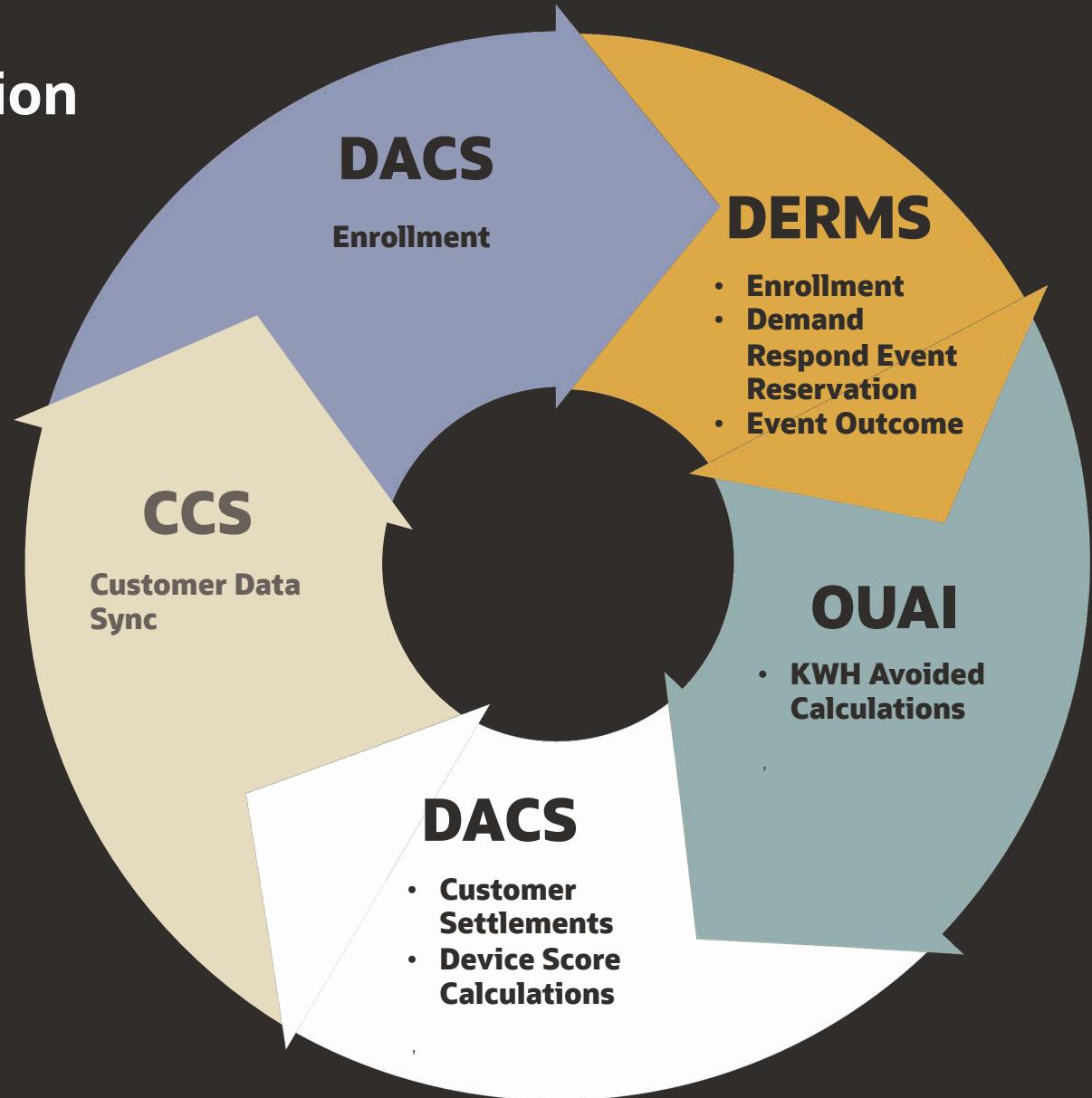


DACS-DERMS-OUAI Integration

Digital Asset Cloud Service (DACS) is a cloud offering that allows utilities to manage customer-owned or utility-provided controllable devices at a customer's location.

DACS exchanges data with various other applications to support Utility processes for

- Demand Response Management
- Distributed Energy Resource Management
- Smart Cities
- Network IoT/Sensors



Field Service Integration

Network Management

- Outage Management
- Storm Management
- Call Center Management
- Review Outage Reports



NMS



OFS

Field Service

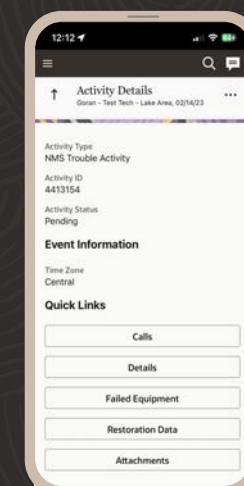
- Scheduling & Routing
- Forecasting
- Booking & Capacity Management
- Field Service Management
- Central Field Management Hub

Operations Mobile App

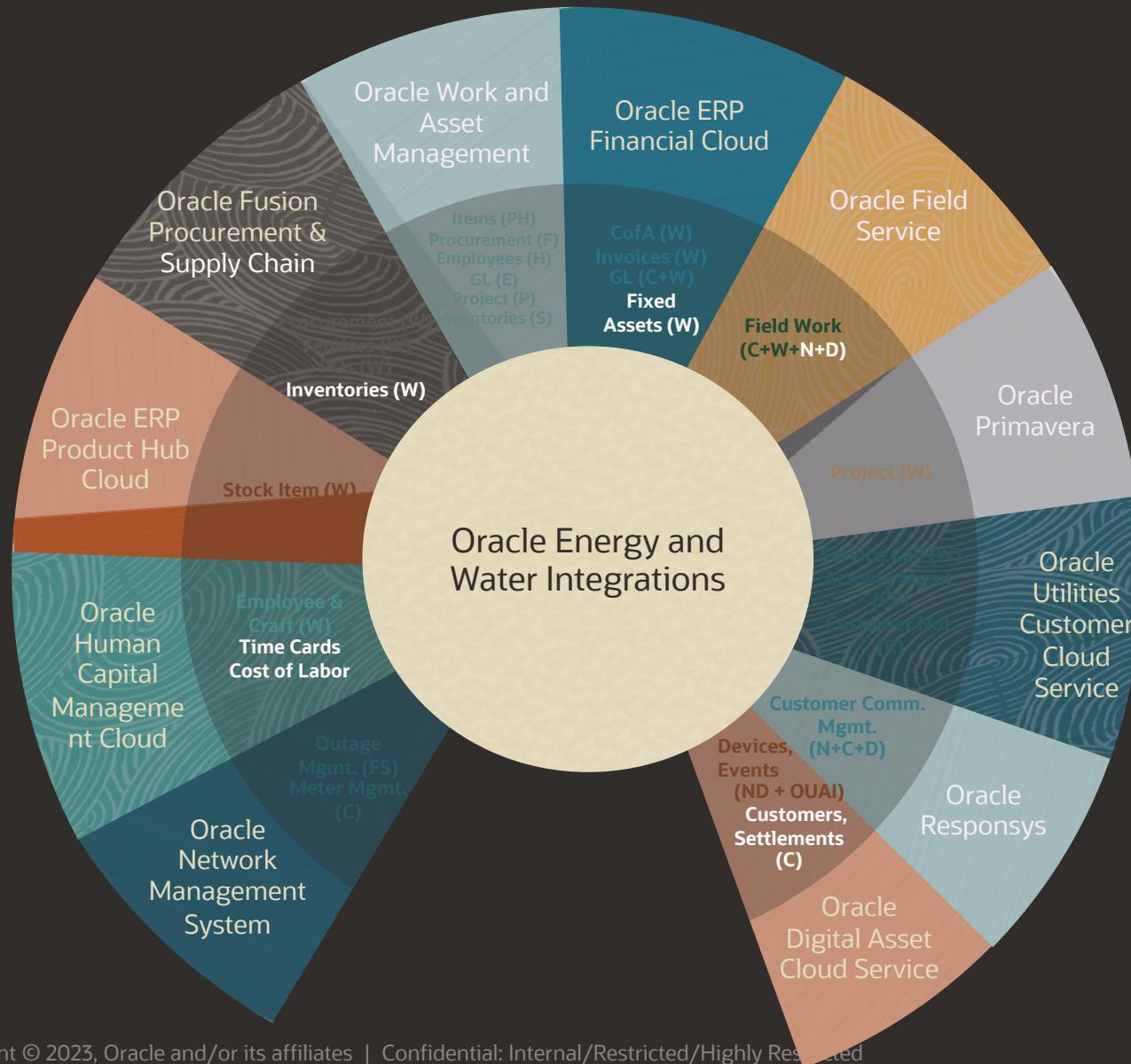
- Switching Plans
- Damage Assessments
- Advanced GIS
- ERTs



OMA



Integration Roadmap



- C** – Customer Cloud Service
- D** – Digital Asset Cloud Service
- E** – ERP Financial Cloud
- F** – Fusion Procurement Cloud
- FS** – Field Service
- H** – Human Capital Management
- N** – Network Management System
- ND** – NMS DERMS
- P** – Primavera
- PH** – ERP Product Hub Cloud
- R** – Responsys
- S** – Supply Chain Management
- W** – Work and Asset Management
- WHITE** – roadmap items

Thank you



ORACLE

