



Oracle Energy and Water  
Customer Edge  
Conference

# Oracle Utilities Application Framework

Technology Overview and Roadmap, March 2023

---

**Brian Owenson**

Sr. Director Technology

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

# OUIAF Focus Areas for the next 12+ Months



**UI Framework**  
Adopting  
modern  
components  
and templates

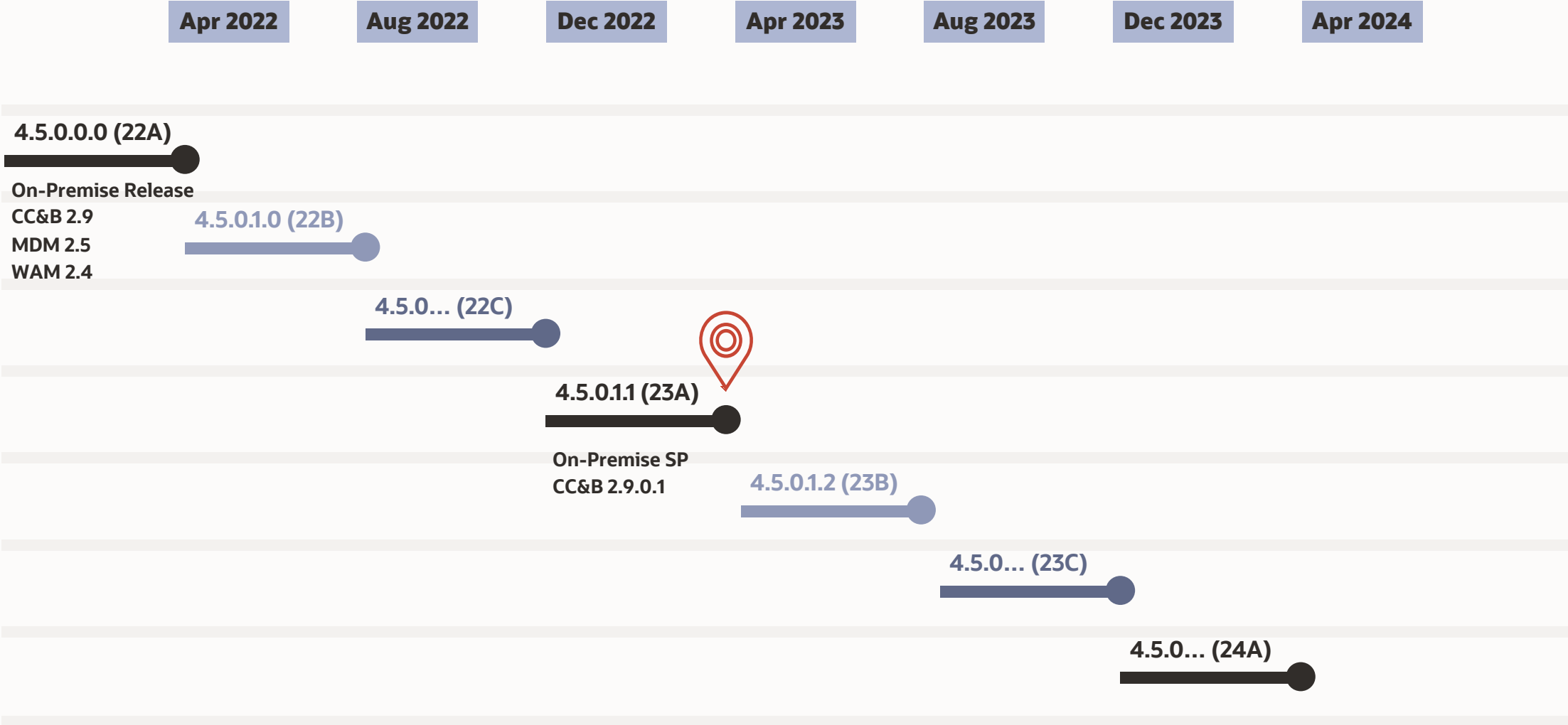


**Low Code / No Code**  
Modernize  
Config Tools



**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

New UI Theme, now the default

21C/22A

**Unified Search**

**Contextual Insights**

**New Fonts, Icons**

**Option to move dashboard right or left**

**Customer Profile: 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  
CIS Division: California  
Customer Class: Residential  
Family Member: Dubois, Gabriel  
Address: 800 Clement St., San Francisco, CA 94103  
Services: 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

**Usage and Billing Chart**  
Cost: All premises, Last 12 months  
Stacked bar chart showing Electric, Gas, and Water usage from Nov 11, 2019 to Nov 12, 2020. Includes a Weather line and estimates.

Unified Search

Contextual Insights

New Fonts, Icons

Option to move dashboard right or left





# Unified Search

## Improving the Usability of Search

The screenshot shows the Oracle Utilities Customer To Meter search interface. At the top left, the browser title is "Oracle Utilities Customer To Meter". The search bar contains a magnifying glass icon, the text "Search Assistant", and a "Search" button. To the right of the search bar is an "Advanced Search" link. Below the search bar, the interface is divided into several sections:

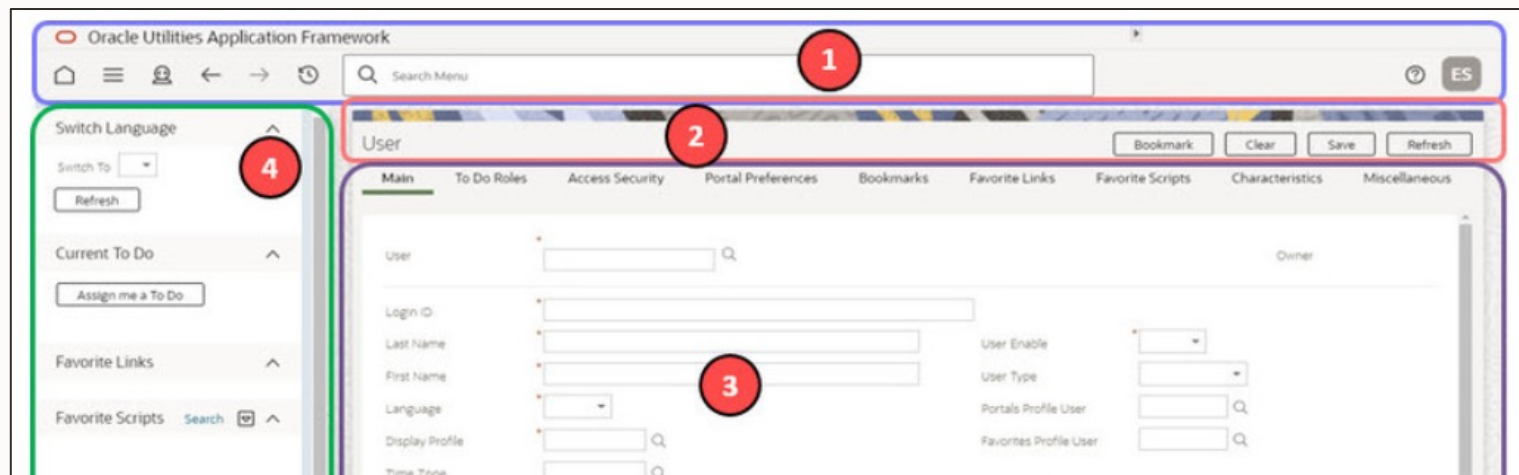
- Customer Meter Search:** A section with a red dashed border containing the text: "Search for customer or meter by name, account ID, ID number, contact information (phone or email), address, badge number or serial number. Click the Advanced Search to navigate to the Customer 360 Search portal." A callout box labeled "Active search details" points to this section.
- Other Searches:** A section with a red dashed border containing four buttons: "Meter Search", "Asset Search", "Customer Search", and "Asset Location Search". A callout box labeled "Other searches available" points to this section.
- Recent Searches:** A section with a red dashed border containing a single entry: "n:Brazil". A callout box labeled "Recent session searches" points to this entry.
- Hints:** A section with a red dashed border containing a list of search hints, each with an up arrow icon and a label: "/ Search Menu", "bn: Badge Number", "sn: Serial Number", "n: Name", "ad: Address", "ac: Account ID", "id: ID Number", and "c: Contact Info". A callout box labeled "Active search hints" points to this list.



# Navigation Hot Keys

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

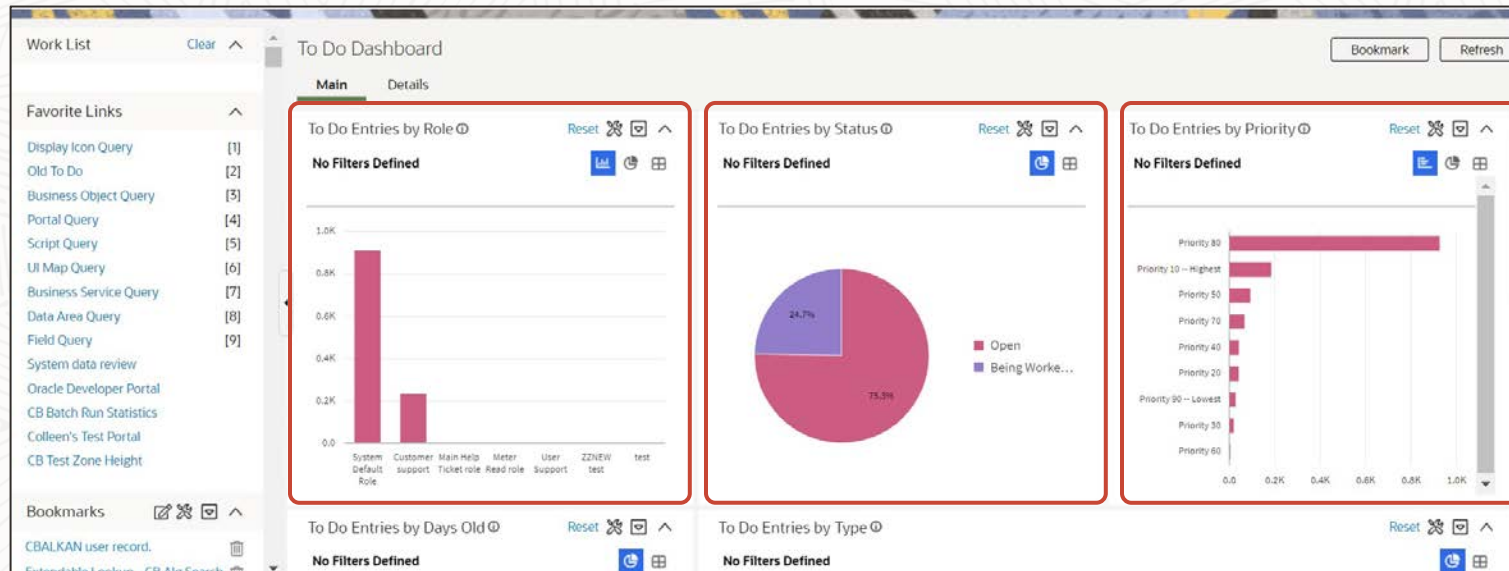
- **Alt+[** Allows you to jump through the 4 major sections of the application
- **Shift+Alt+[** Goes to the previous section



# Navigation Hot Keys

**Alt+]**  Allows you to jump to the next zone

**Shift+Alt+]**  Go to the previous zone





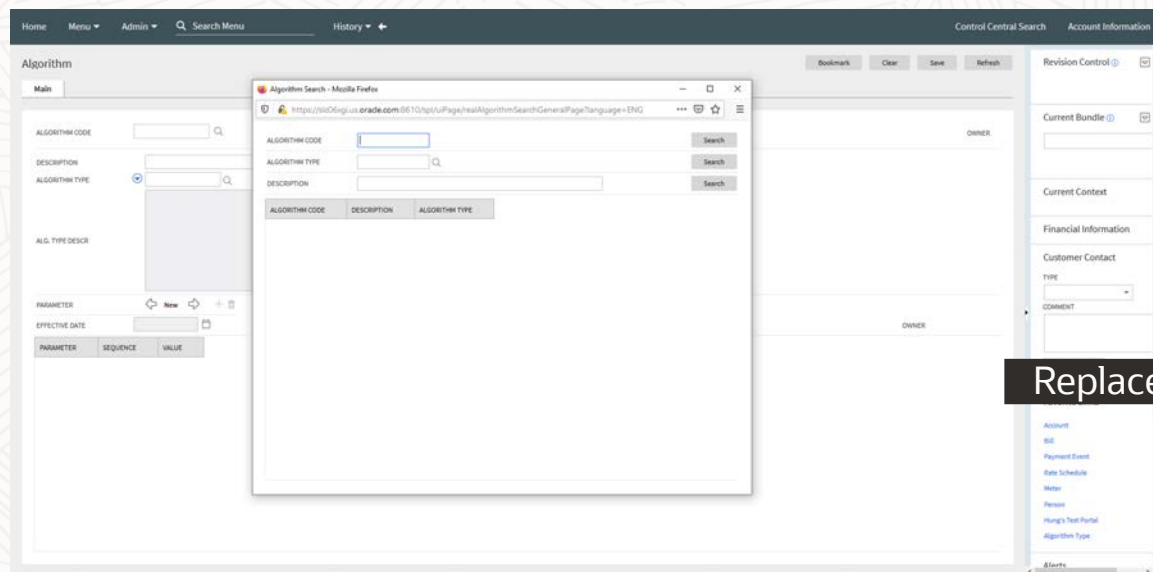
# Zone Layout

More options added to support different zone heights and widths

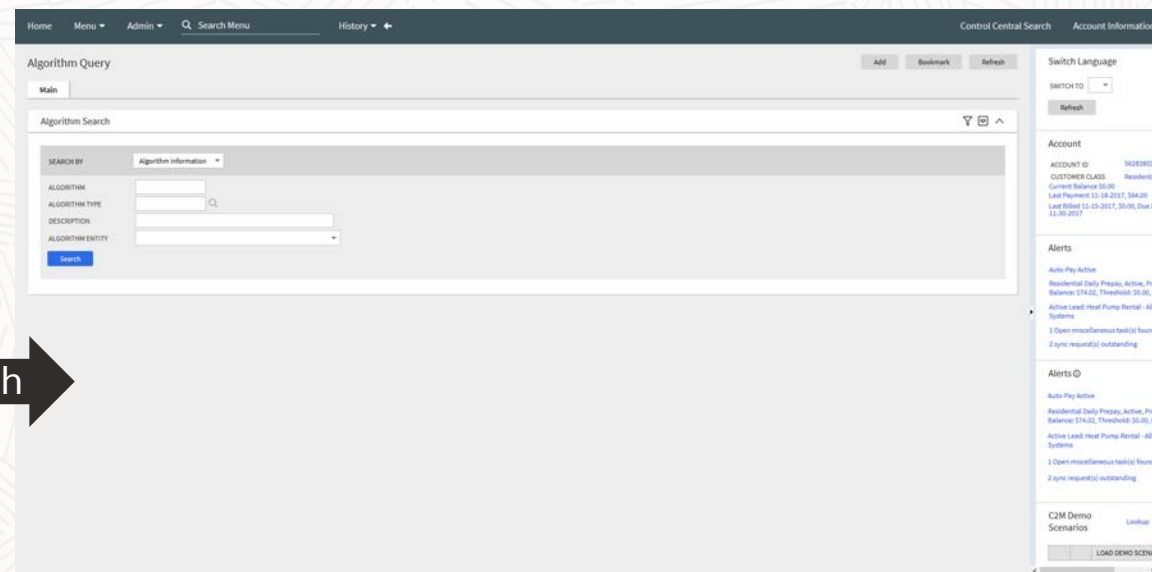


# Framework User Interface Updates

Query Portals Replace Popup Search Windows, Portals Replace Fixed Pages



Replaced with



## 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

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 ID	
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	<input type="checkbox"/>

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

You can search for fields marked with that attribute

Field Search

Search By: Additional Information (F1-FLDSRCHQ2)

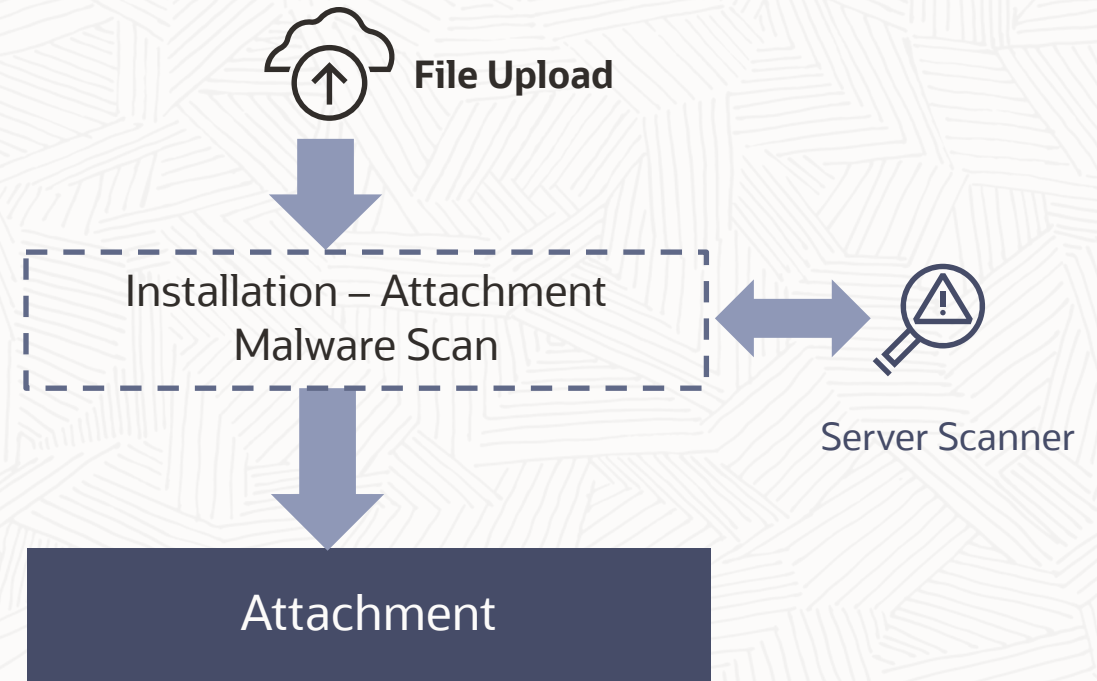
Expand Filters: Filters: PII Class May Contain Personal Information (PII)

	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 <u>Algorithms</u> Accessible Modules Installed Products				
		System Event	Sequence Number	Algorithm
+	🗑️	* Attachment Malware Scan ▾	* <input type="text" value="1"/>	🔗 FI-ATCHM-WS 🔍 Attachment Malware Scan Using ClamAV

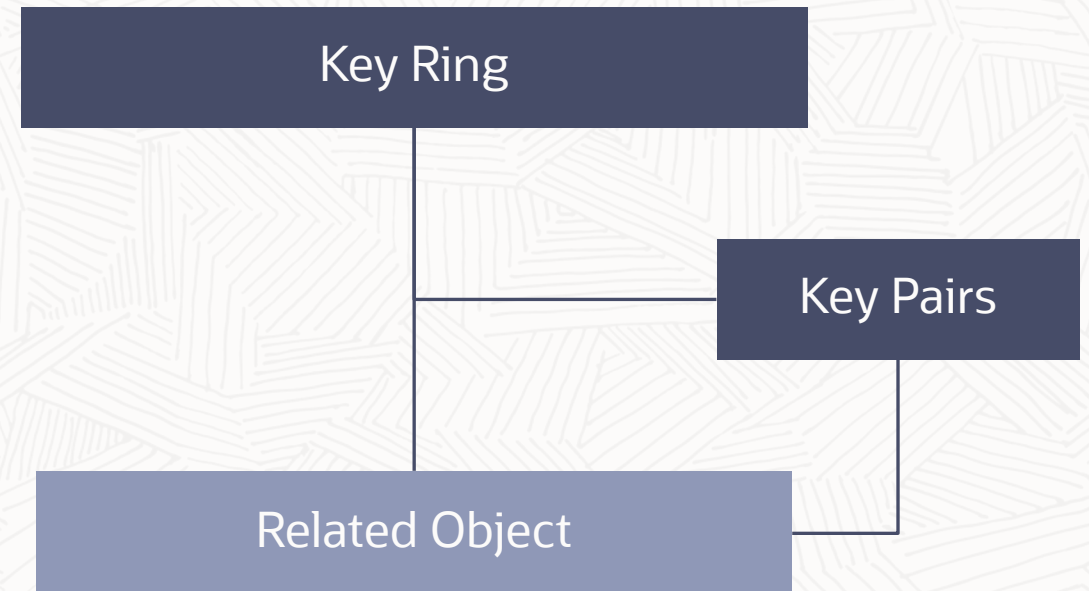
On-premise implementations can supply their own algorithm

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..



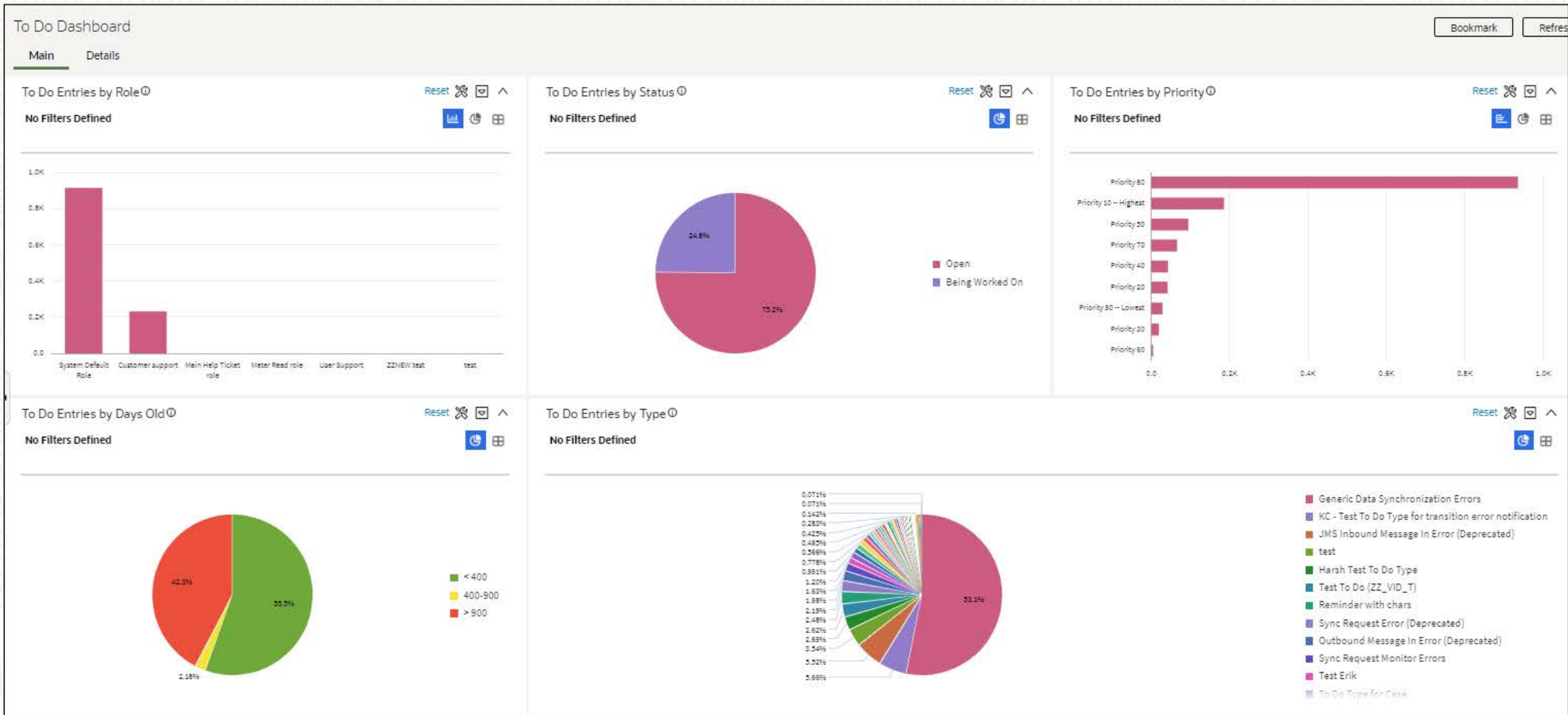
## Other Security Changes

- 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 (FI-BSFLS) , Priority Priority 10 -- Highest (010)

Update Assign Unassign Complete

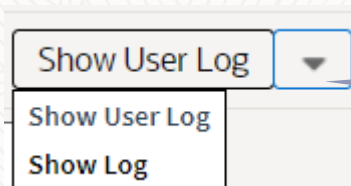
<input type="checkbox"/>	Action	Priority	Days Old	To Do Type	Status	Assign to User	Message
<input type="checkbox"/>	Work	Priority 10 -- Highest	309	<a href="#">Business Flag Sync Errors</a>	Open		Deleted To Do Types and Excluded To Do Types are mutually exclusive. Please p
<input type="checkbox"/>	Work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

You can further refine the list



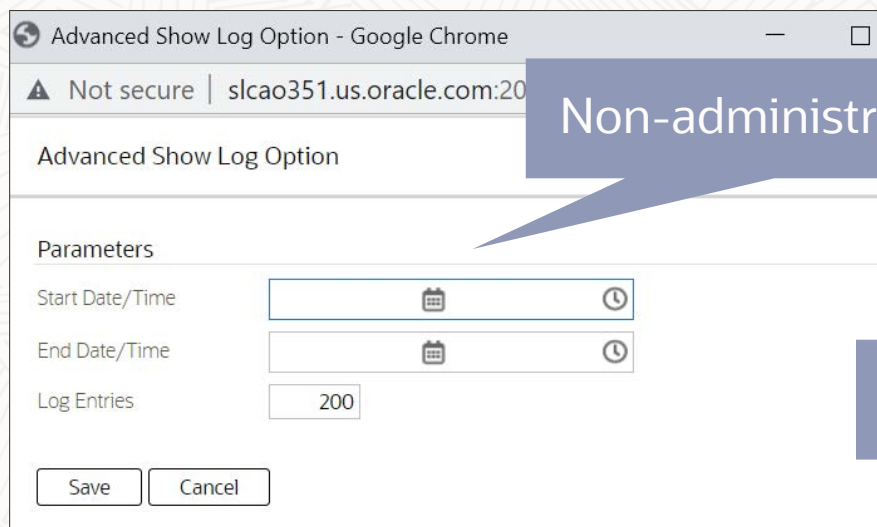
## User Log - Provide a Date Range

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



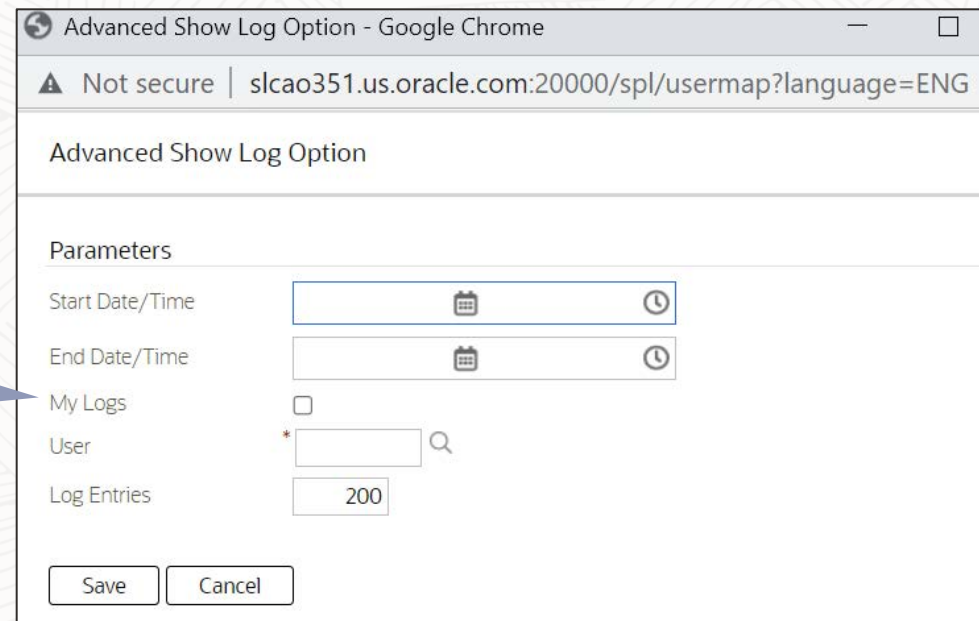
The dropdown and additional Show Log option was previously only for administrators

- 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



Non-administrative user

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	Rec
<input type="text" value="fileName"/>	<input type="text" value="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

<input type="text" value="processedFileExtension"/>	<input type="text" value="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}
---	---	--



# Adding a Batch Job Submission request

Batch controls define their parameters and can define parameter values

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

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

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

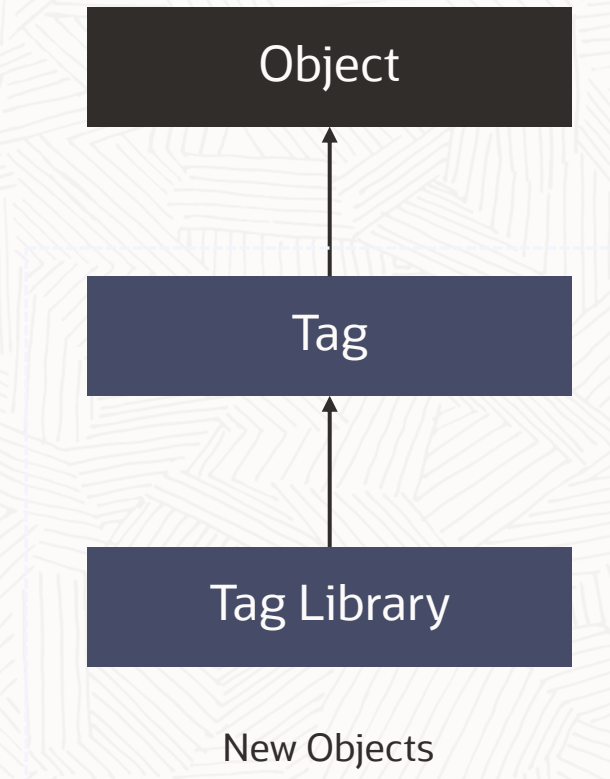
New in 22C, parameters defaulted always from the batch control always

Web Service Name	Batch Job Submission
Operation Name	submit
Description	Submit Batch Job
Script	<a href="#">Submit Batch Job</a> <a href="#">View Schema</a>
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







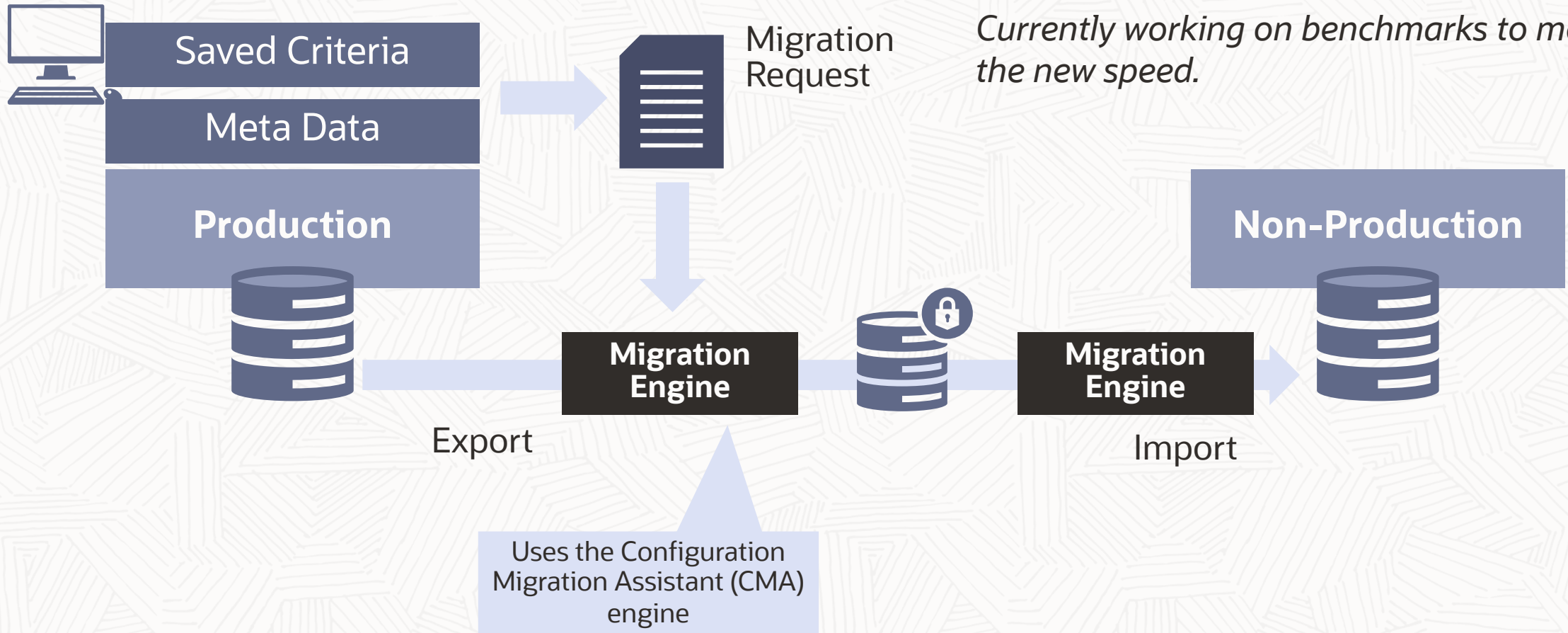
What we're currently  
working on



# Test Data Subsetting

Delivered performance improvements in 22C.  
New "bulk upload" works faster for transactional data.

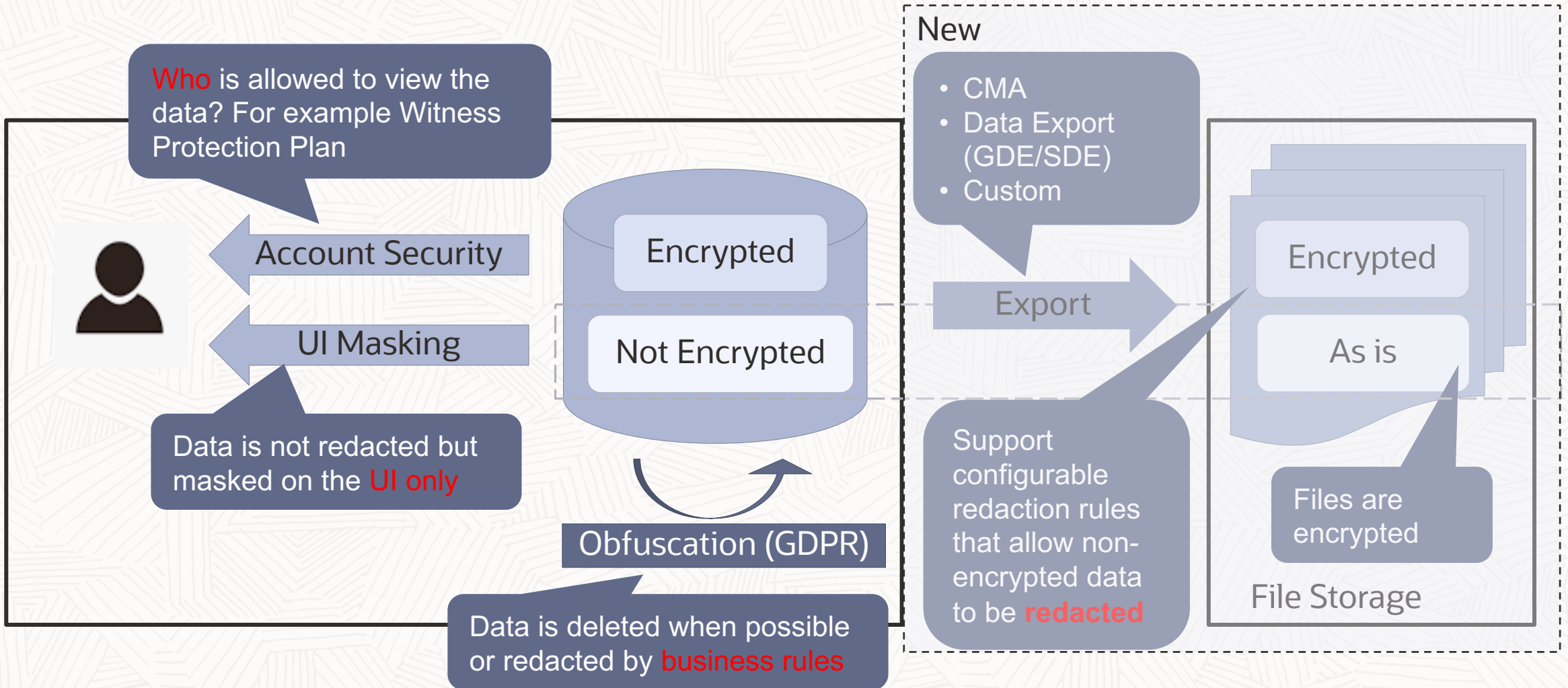
*Currently working on benchmarks to measure the new speed.*



Uses the Configuration Migration Assistant (CMA) engine



# 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

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

Migration Data Set Export

Main ⓘ

Migration Request: C1-Users 🔍 User - Miscellaneous (CCB), Criteria-based

\* 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.gbucdsint02phx.ora

Redaction Option:

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

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





# Obfuscation Portal

In this release a new Obfuscation Portal displays configuration for various means of masking or redacting data

Obfuscation Configuration

**Main**

Redaction Rules Add Filter Close Up

	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

Masking Edit Close Up

Encryption Edit Close Up

	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'

Review Fields for Redaction Rules Add Filter Close Up

	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

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.

The screenshot illustrates the workflow for configuring menu security. It starts with the 'Menu Links' section, which includes a link to 'Menu Application Security'. This leads to a table of menu lines for the 'CL\_SYSTEM' menu. The table lists four navigation options with their respective menu items and descriptions.

	Sequence	Navigation Option/Submenu	Menu Item	Description	Item Count	Menu Line ID	Owner
1	50	Navigation Option	Action Method	Action Method	2	F157956353	Framework
2	50	Navigation Option	Algorithm Query	Algorithm	2	F177952638	Framework
3	50	Navigation Option	Algorithm Type Query	Algorithm Type	2	F131512593	Framework
4	50	Navigation Option	Batch Control Query	Batch Control	2	F154255960	Framework

Next, the 'Menu Line Security' dialog is shown, where the user group is set to 'Anthony's Code (ZZ\_BDSGP)'. This leads to the 'Application Security' dialog, which allows assigning application services to the user group. The dialog shows a list of application services and their access modes.

Application Service	Application Service	Access Mode	Expiration Date
Managed Content	FWLTMGCT	Add	
Managed Content	FWLTMGCT	Change	
Managed Content	FWLTMGCT	Delete	
Managed Content	FWLTMGCT	Inquire	
Managed Content Query Portal	FIMANCQ	Inquire	

# 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

Application Security Query

**Main**

Application Security Search 🔍

Search By: Application Security Information ▾

User Group:

User:

Component Type:

Component Description:

Application Service:

Owner:

Search

Batch Control  
Dashboard Zone  
Internal  
Menu Line  
Miscellaneous  
Report Definition  
System  
Unclassified  
Web Service

Manage by rights

Application Security Query

**Main**

Application Security Search 🔍

Search By: User Comparison ▾

User:

Compare to User:

Component Type:

Component Description:

Search

Batch Control  
Dashboard Zone  
Internal  
Menu Line  
Miscellaneous  
Report Definition  
System  
Unclassified  
Web Service

Compare users

**Main**

Application Service Search 🔍

Search By: Release Information ▾

Release Version: 23A ▾

Application Service Description:

Search

Find new services



# User Group Security

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

User Group: System User Group Search

Main Users **Service Manager** Secured Components

Application Service / Access Modes

Filters: User Group System User Group Remove

<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	CILCAAHP	01-01-2100
<input type="checkbox"/>	Account Appointment	Inquire	X1APPT	01-01-2100
<input type="checkbox"/>	Account Bill/Payment History	Inquire	C1ACBPLY	01-01-2100
<input type="checkbox"/>	Account Bill/Payment History	Inquire	CILFBPHP	01-01-2100

1000 Results. More rows exist.

Add Application Service / Access Modes

Security Type Authorization

Update

<input type="checkbox"/>	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 (f
<input type="checkbox"/>	Data Masking	C2M-MASK	Mask social security number		Authorized (unmasked), Not authorized (f
<input type="checkbox"/>	Person	CILCPERP	Receive Duplicate Person Warning		Receive Error (Not Authorized), Receive W
<input type="checkbox"/>	Premise	CILCPRMP	Field Level Security - Protect Field	Authorized	Not authorized

4 Results.

Main **Users** Service Manager Secured Components

Users

Expand Filters Filters: User Group System User Group

Remove Set Expiration Date

<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"/>	ATAPANTO	Tapano (C2M 2.8.0.0.1Demo), Amranda	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
<b>Maintenance Object</b>	<b>2</b>
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	



# Customer Modification (CM) Extensions in SaaS

22B,C (CA) 23A (GA)

## Oracle Utilities Java Migration Cloud Service

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

Table: To Do Entry

Search Add Bookmark Refresh

Main Relationship Constraints Indexes

Table Indexes Add   

	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;
```

22C

HTML Editor

Test UI Map ^

```
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.parentNode.id;
```

# Config Tools: Data Explorer Improvements

## Refactor Data Explorers

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

Business Object Query Add

Main

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 Identify ...
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

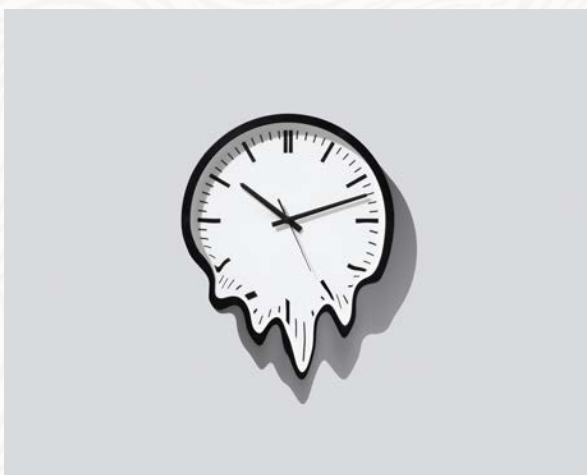
Technical Operations and Technical Configuration materials are **now** available via Oracle Video Hub

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)**

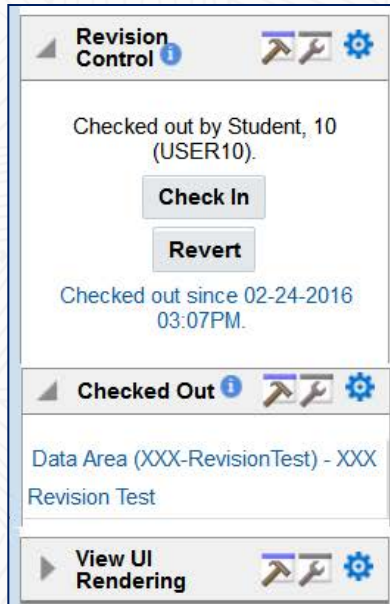


# Always-on application auditing

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.

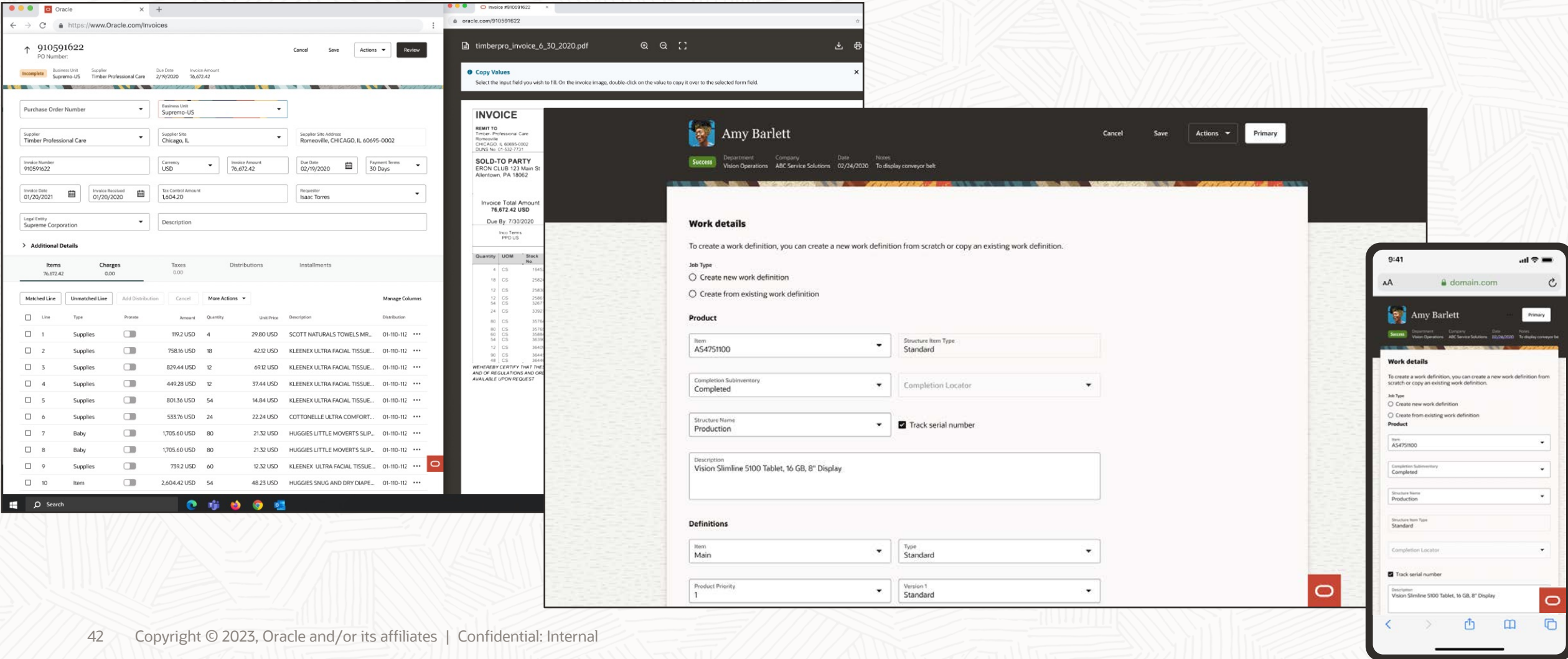
- It currently doesn't handle CLOBs well.





# Refresh of UI Framework

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

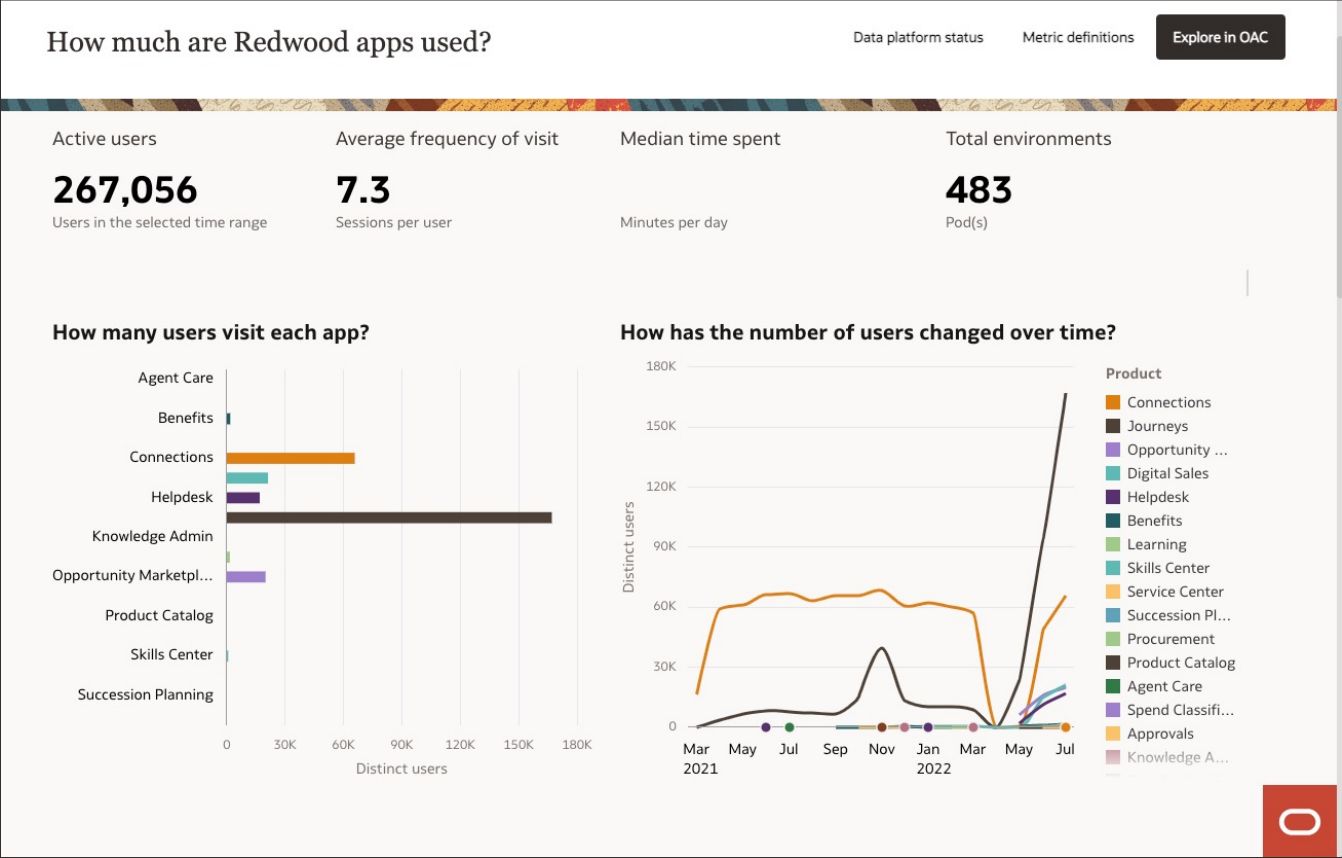


# Add Telemetry to SaaS

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 'Extensions Dashboard' with a 'Main' tab. It features an 'Extensions Summary' table, an 'Extension Entities' table, and an 'Extension Details' table.

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

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

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



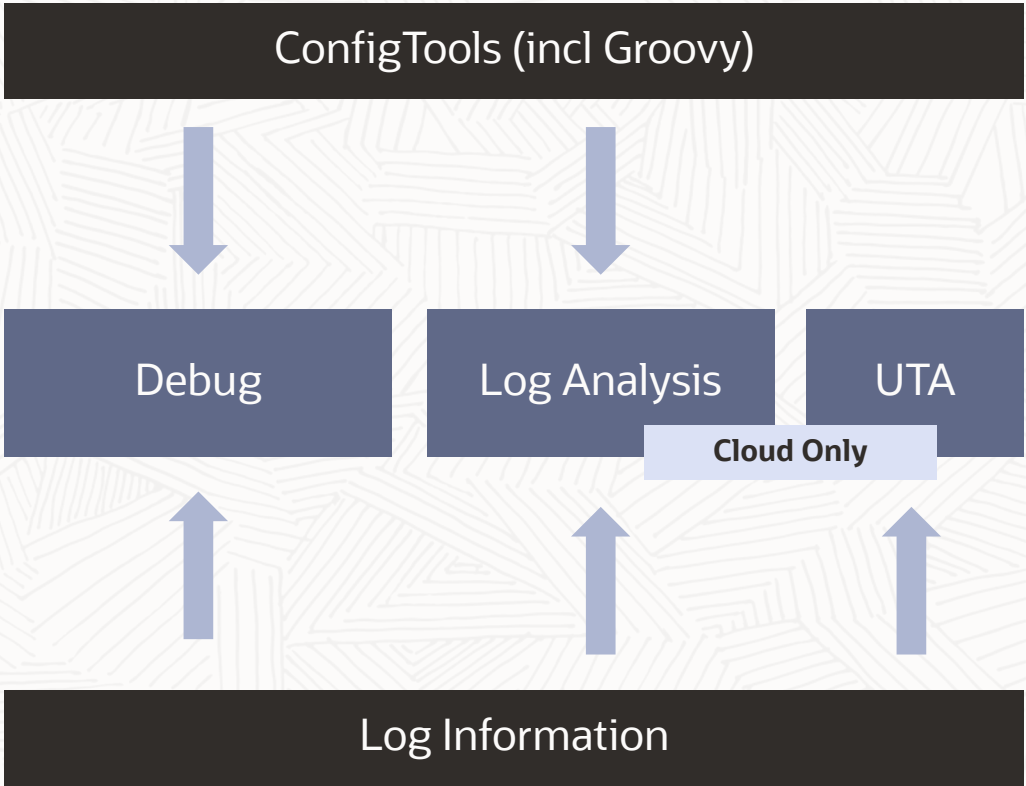
# Config Tools: Improvements to Diagnostics and Debugging

## 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

Extendable Lookup: F1-RedactionFunction

Confirm Redaction Functions

- Date Mask
- Number Mask
- String Mask
- Regular Expression

Table

Field

Configure Redaction Rules

- Physical Field
- Referenced Field
- XML Storage (XPath)

- CMA
- GDE

Can override redaction at runtime

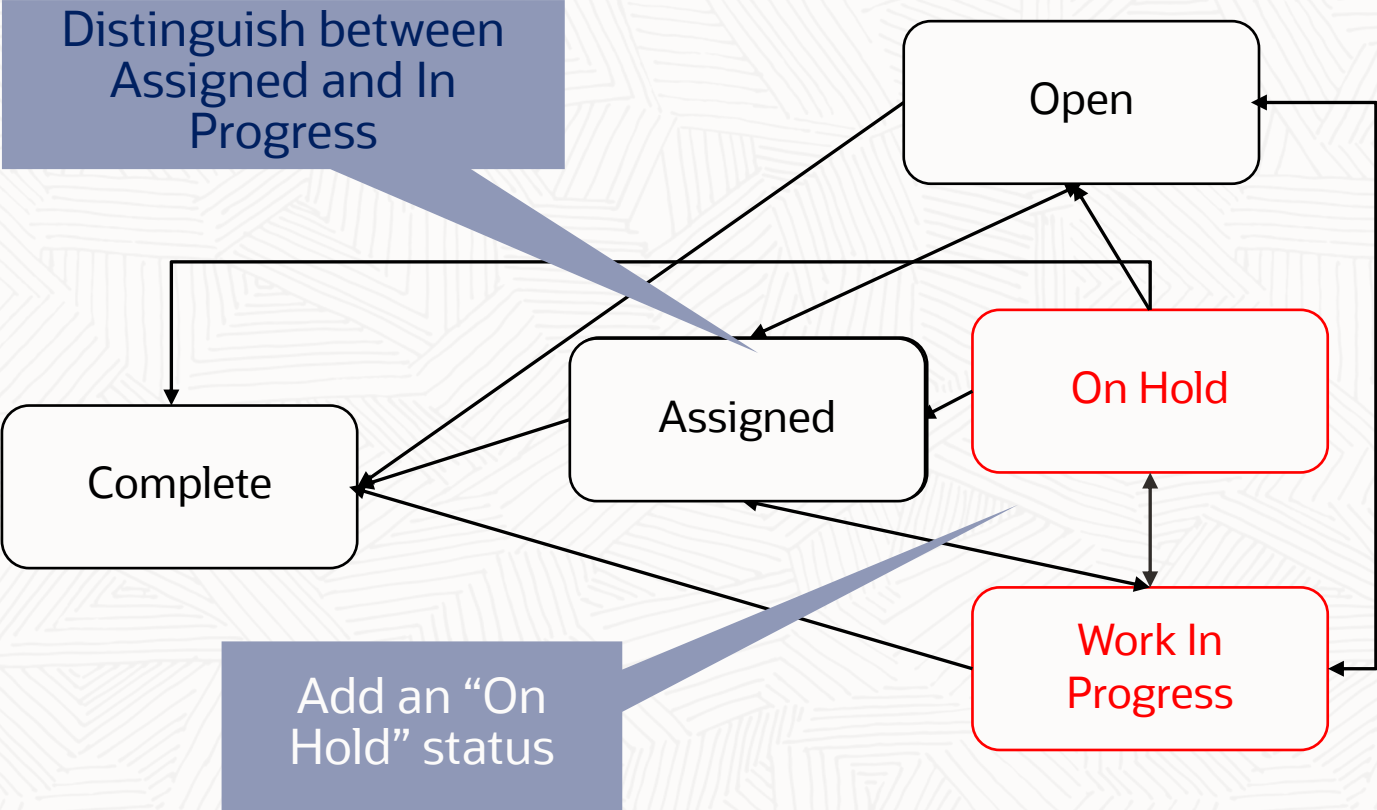
User Logs

*Plan to add redaction rules here – this is challenging*





# Updating the ToDo State Model



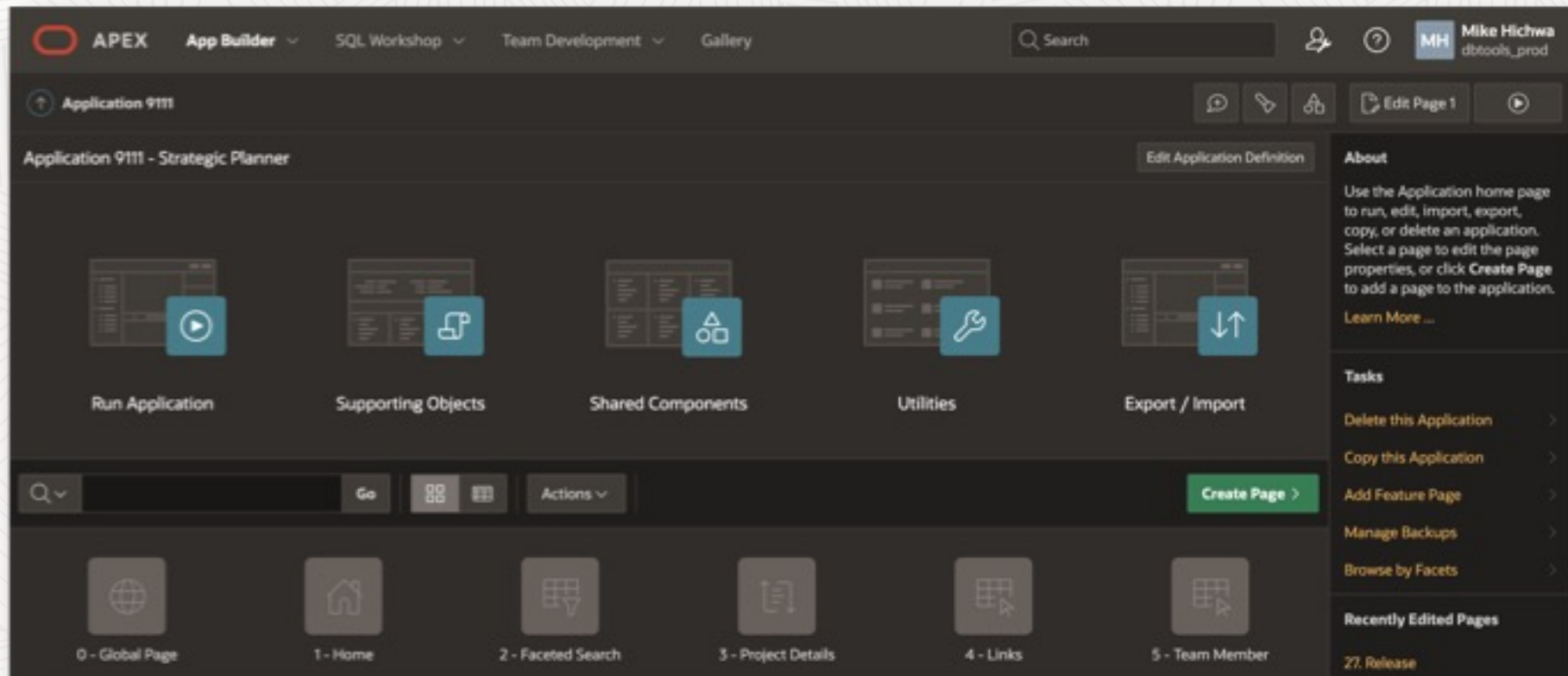
# APEX "Integration"

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

Oracle Energy and Water  
Customer Edge  
Conference

# Enterprise SaaS

Strategy & Roadmap

---

Brian Michel

Oracle Energy and Water Product Management

March 14, 2023



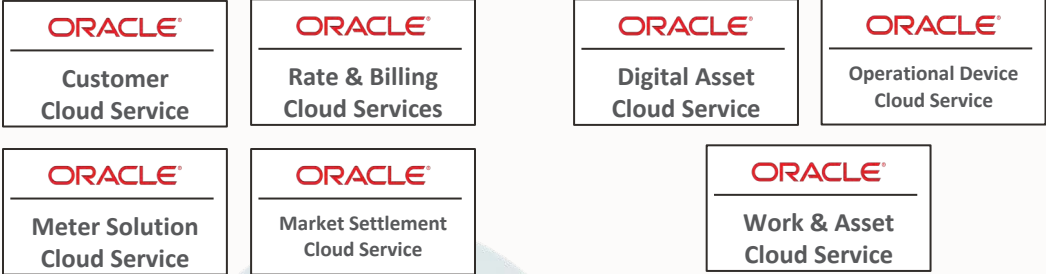


**Brian Michel**  
Cloud Product Management



# Energy and Water: Oracle Utilities Enterprise SaaS

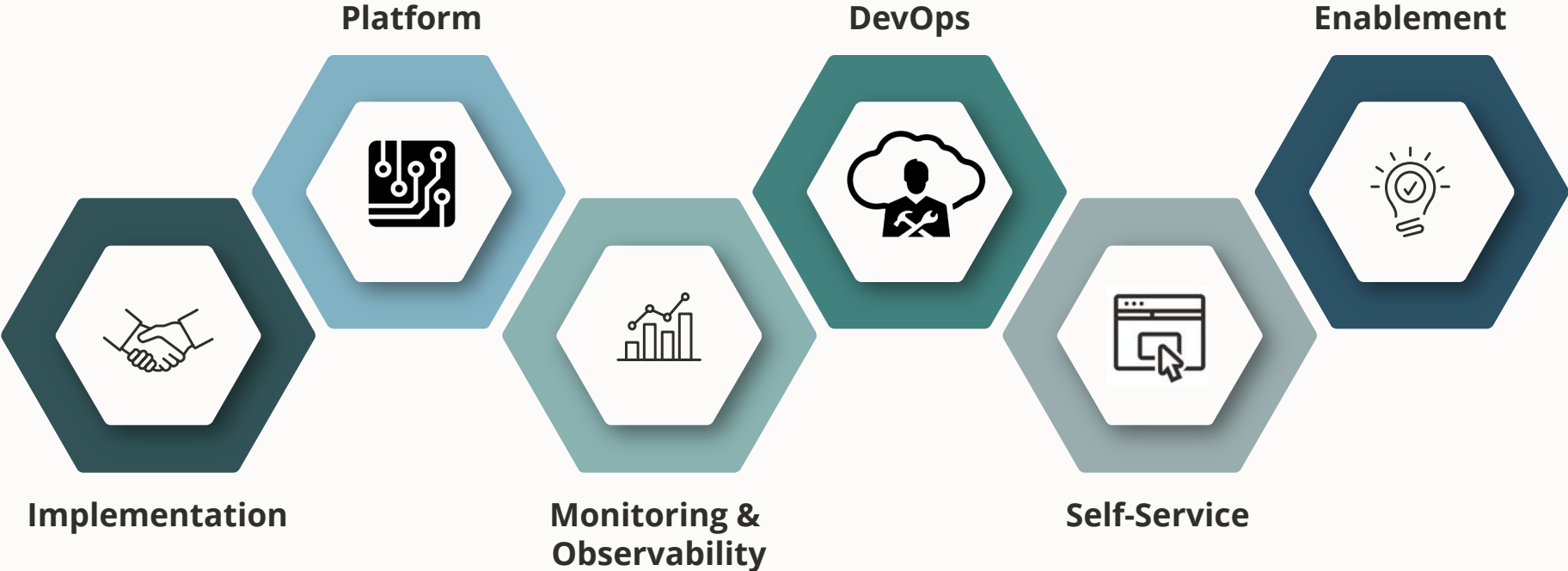
*Provide tools and services that will allow utilities to migrate to, implement and operate mission critical enterprise software as easily, safely, efficiently, and as cost effectively as possible.*



**Reduce Cost, Reduce Risk, Unlock Innovation**



# Enterprise SaaS Investment Themes



# Enterprise SaaS Investment Themes



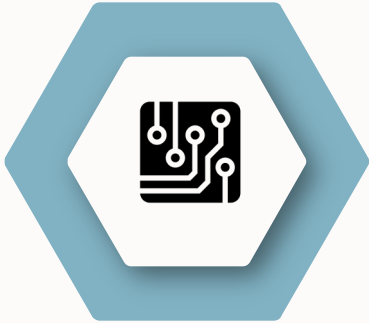
## Implementation

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



## DevOps

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



## Platform

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



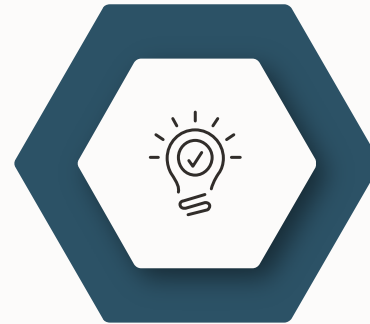
## Self-Service

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



## Monitoring & Observability

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



## 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



### Disaster Recovery and Service Availability

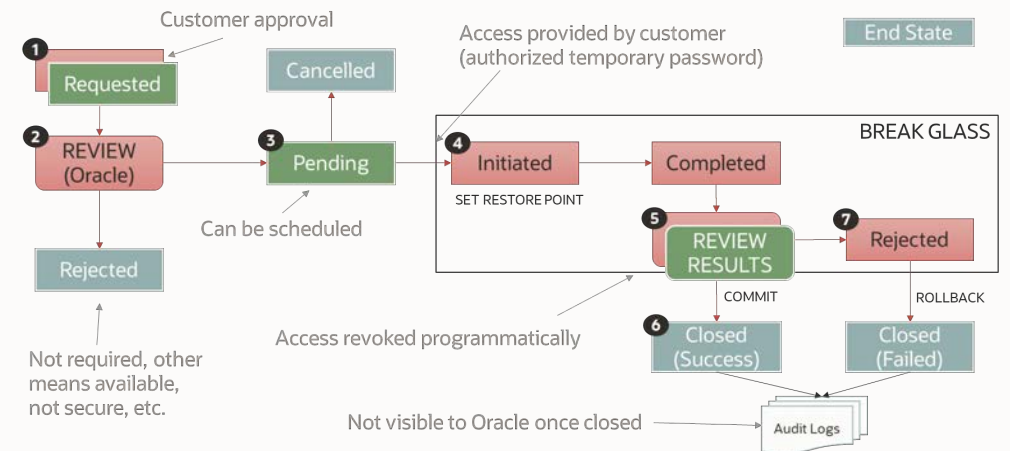
As described in the Oracle Global Business Unit Cloud Services Pillar Document, this Oracle Cloud Service has the following Recovery Time and Recovery Point Objectives and Target Service Availability Level for the Production Environment:

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

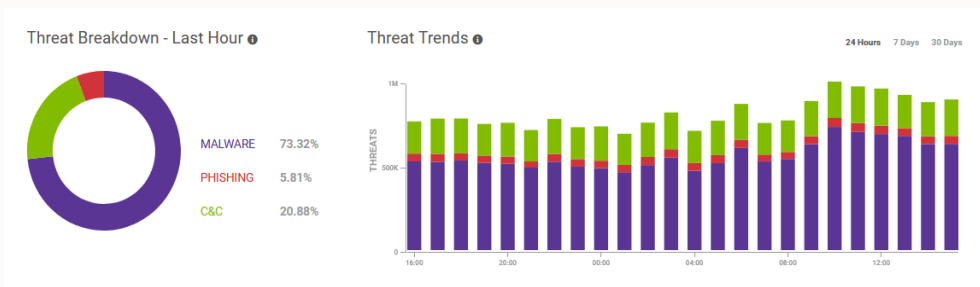
### Break Glass Event Workflow



# Recent Highlights

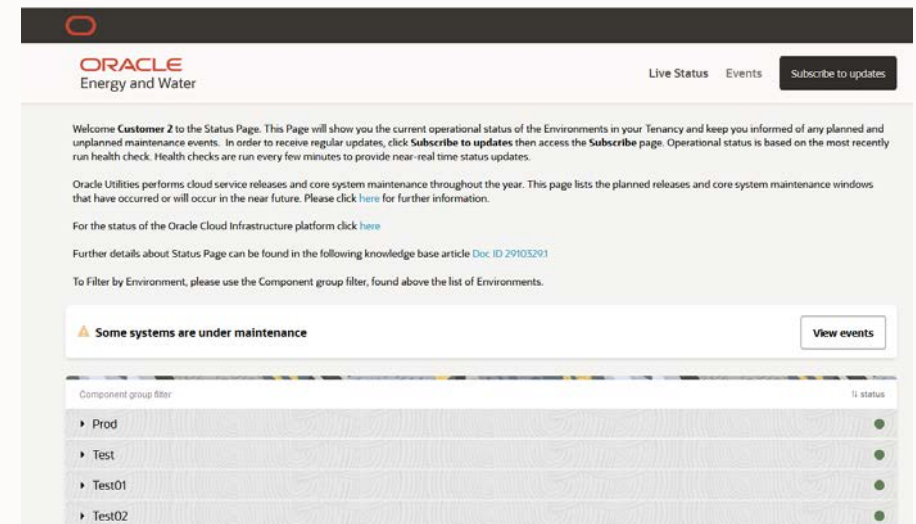
## Akamai

- ✓ 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

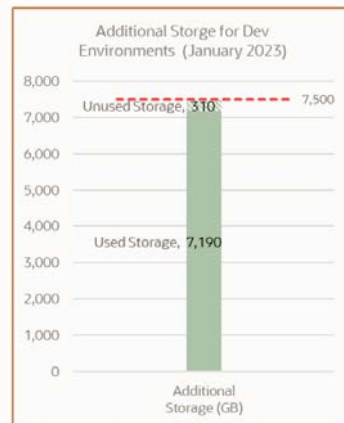
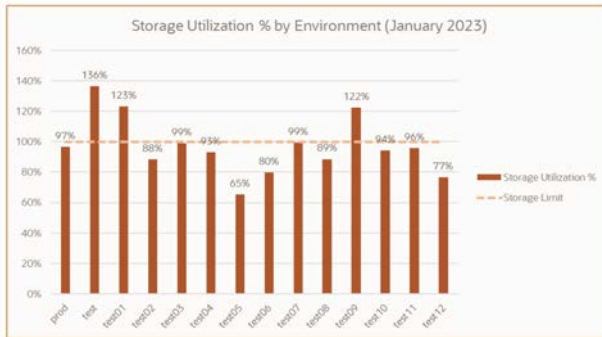




# Recent Highlights

## DB Storage Reports

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



Data as recorded on the 02-Jan-23

## Improved Operational Notifications

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



### Sizing Assumptions

Based on this order document [redacted] your environment has been sized for following parameters:

- Billable Service Customers: [redacted]
- Batch Window: 6 hours

Threads by environments groups:

- Test: DEFAULT (9) NOCACHE (6)
- Prod: DEFAULT (21) NOCACHE (6)
- Dev: DEFAULT (6) NOCACHE (6)

Number of Concurrent Online Users:

- Test/Prod: 14
- Dev: 10

Number of Integration request/ minute (Peak Load):

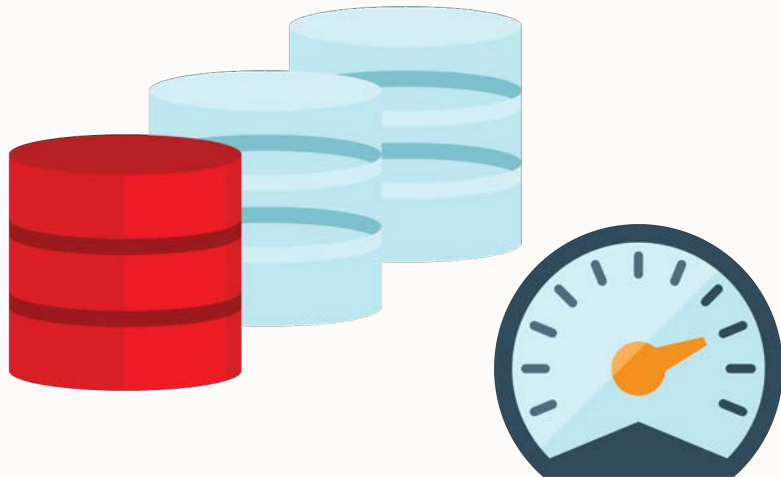
- Test/Prod: 230
- Dev: 230



# Recent Highlights

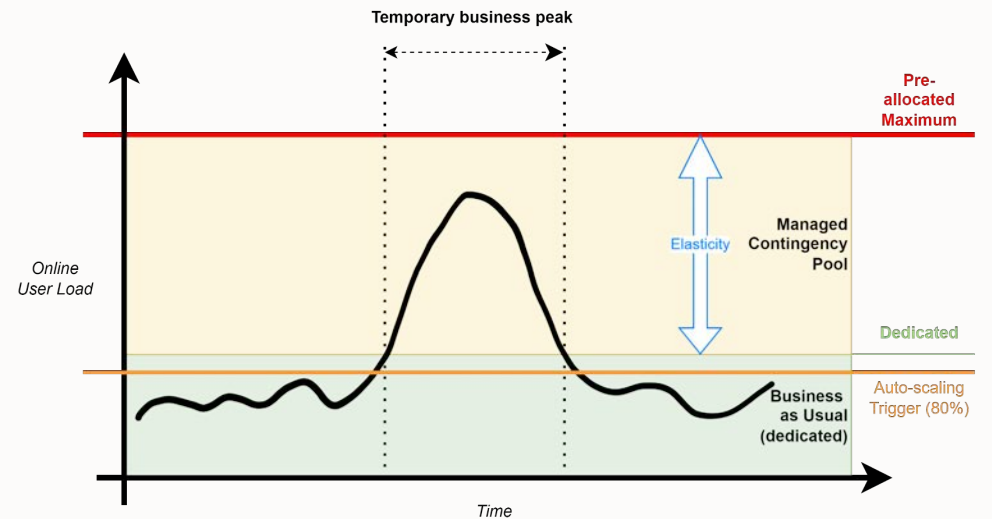
## Data Refresh / Cloning Improvements

- ✓ 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

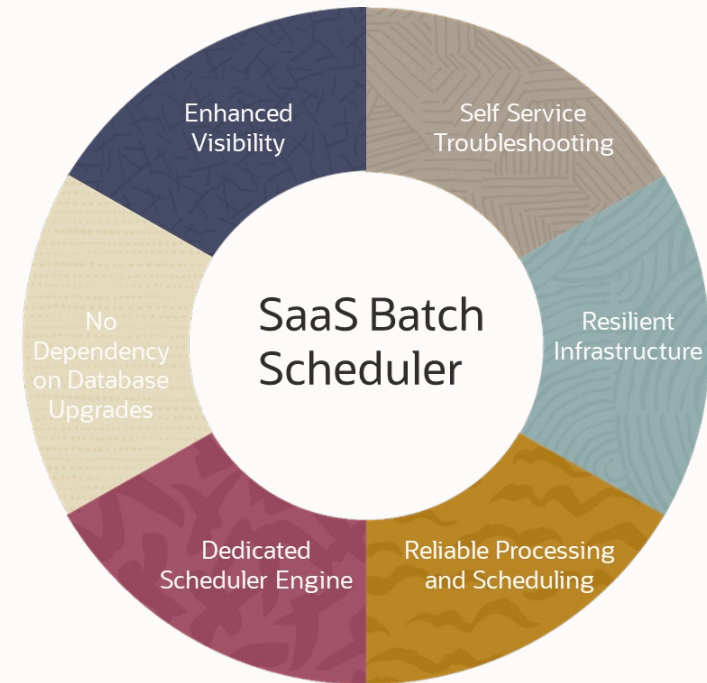
## Autonomous DB

- ✓ 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

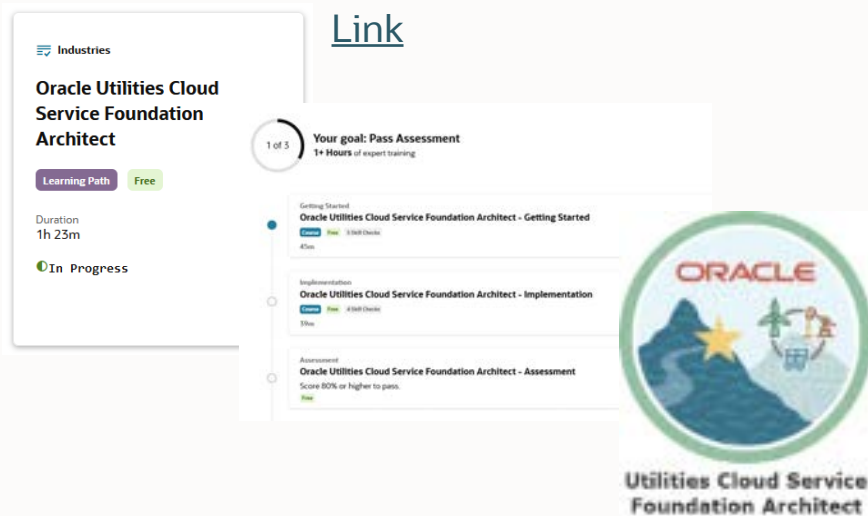




# Recent Highlights

## Learning Path: Oracle Utilities Cloud Service Foundation Architect

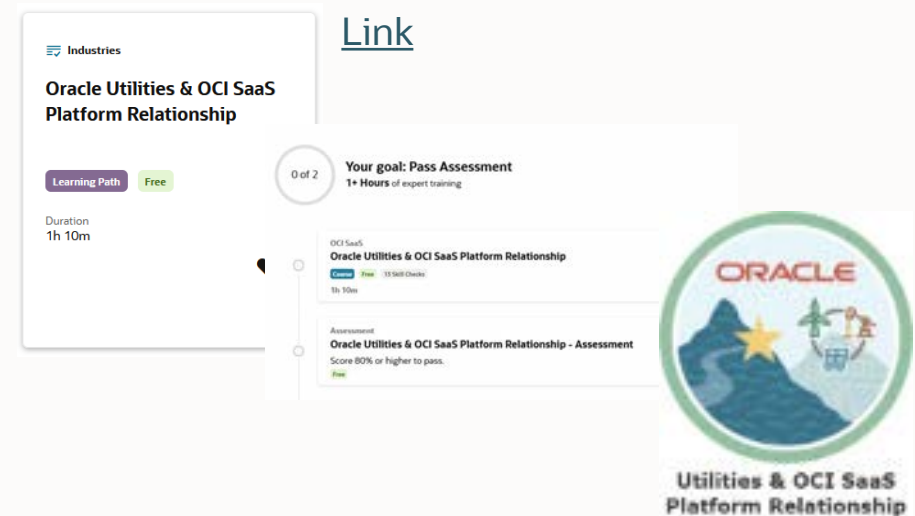
- ✓ Covers key concepts for Cloud Service Foundation Architects.
- ✓ Learn about security, batch processing and monitoring, Configuration Migration Assistant (CMA) and Information Lifecycle Management (ILM) and log analysis



The screenshot shows the Oracle Learning Path interface for the 'Oracle Utilities Cloud Service Foundation Architect' course. It includes a 'Link' button, a progress indicator showing '1 of 5' steps, and a goal of 'Pass Assessment' with '1+ Hours of expert training'. The course is free and has a duration of 1h 23m. The progress bar shows the first step, 'Getting Started', is completed. The course content includes: 'Getting Started: Oracle Utilities Cloud Service Foundation Architect - Getting Started' (45m), 'Implementation: Oracle Utilities Cloud Service Foundation Architect - Implementation' (31m), and 'Assessment: Oracle Utilities Cloud Service Foundation Architect - Assessment' (Score 80% or higher to pass). The Oracle logo and a circular graphic with a star and utility icons are also visible.

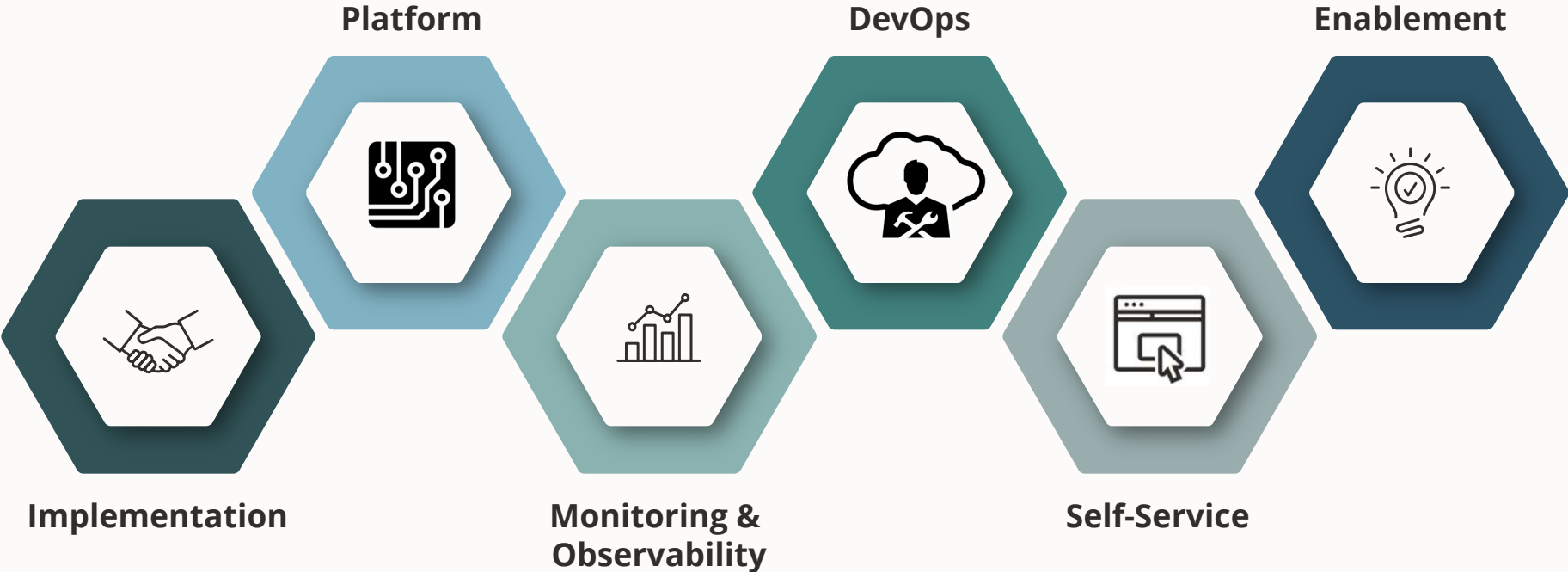
## Learning Path: Oracle Utilities & OCI SaaS Platform Relationship

- ✓ 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 Learning Path interface for the 'Oracle Utilities & OCI SaaS Platform Relationship' course. It includes a 'Link' button, a progress indicator showing '0 of 2' steps, and a goal of 'Pass Assessment' with '1+ Hours of expert training'. The course is free and has a duration of 1h 10m. The progress bar shows the first step, 'OCI SaaS: Oracle Utilities & OCI SaaS Platform Relationship', is completed. The course content includes: 'OCI SaaS: Oracle Utilities & OCI SaaS Platform Relationship' (1h 10m) and 'Assessment: Oracle Utilities & OCI SaaS Platform Relationship - Assessment' (Score 80% or higher to pass). The Oracle logo and a circular graphic with a star and utility icons are also visible.

# Enterprise SaaS Roadmap Focus Areas (next 12 months)



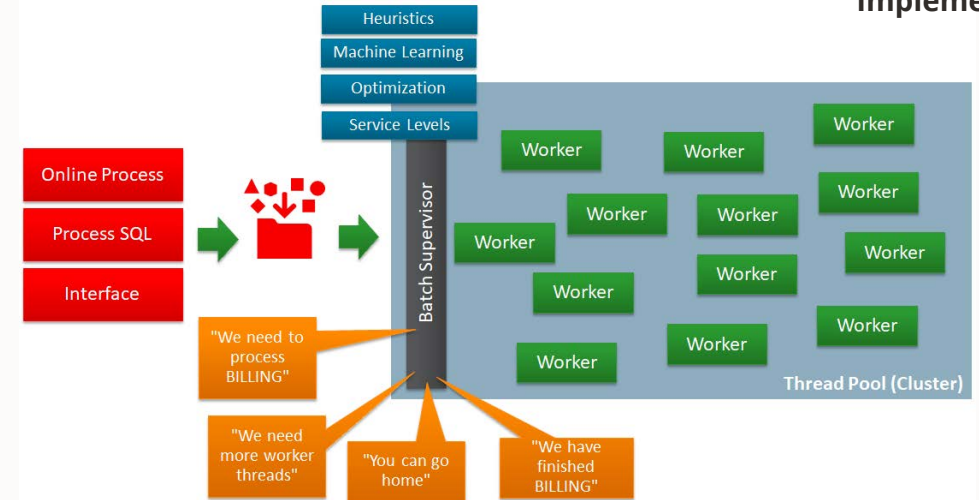


Implementation

# Implementation

## Next Generation Batch Infrastructure

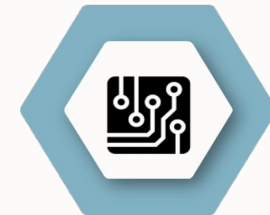
- Scalable, nimble batch architecture
- Workload automatically divided up into workstreams
- Workers are dynamically allocated to process workstreams
- Improved monitoring:
  - Scale up / down
  - Predict ETA
  - Processing optimization
  - Better completion/error detection



### 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

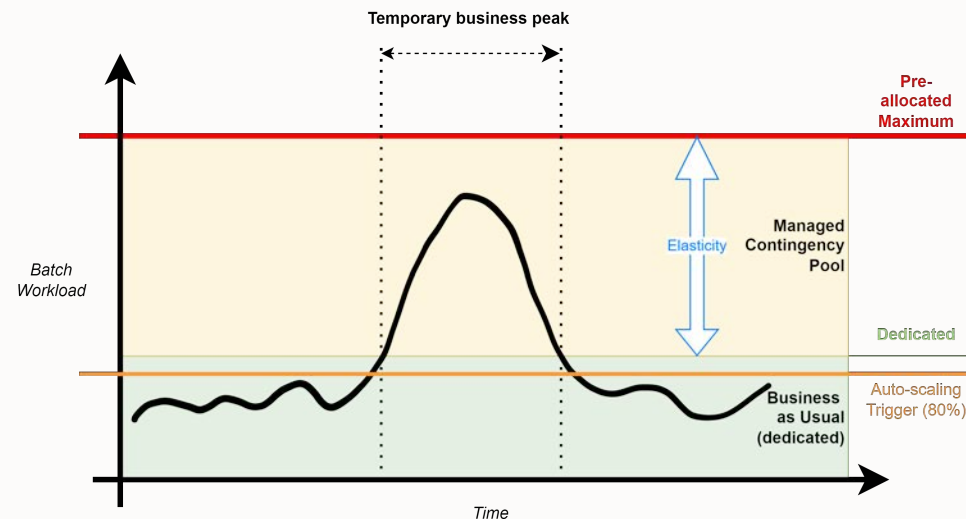




# Platform

## 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:

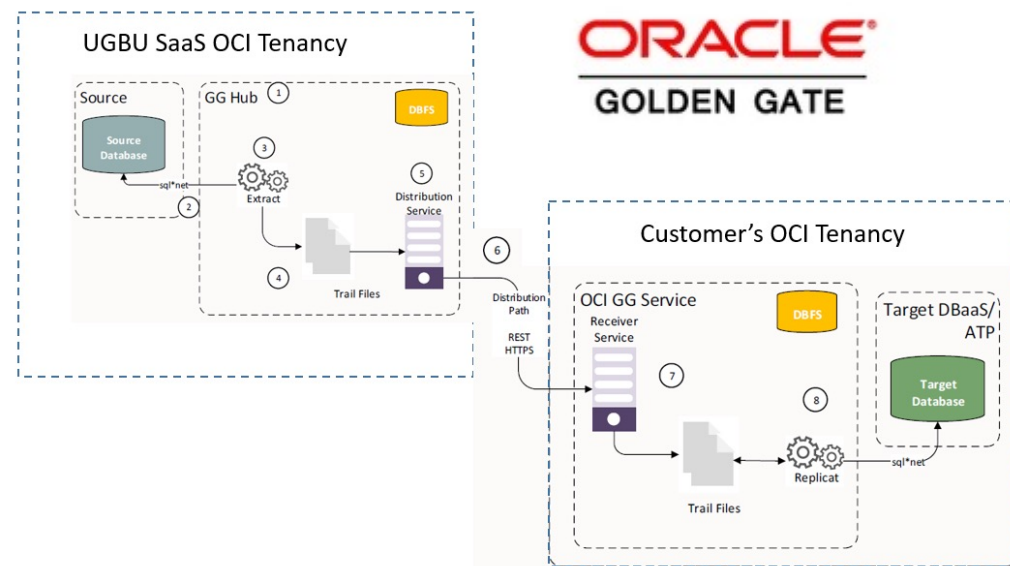
- ✓ Batch processing can scale up to leverage any additional, available resources
- ✓ Provides additional buffer for normal workload peaks
- ✓ Enabler for catch-up / boost processing (future)



# 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 &  
Observability

# 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

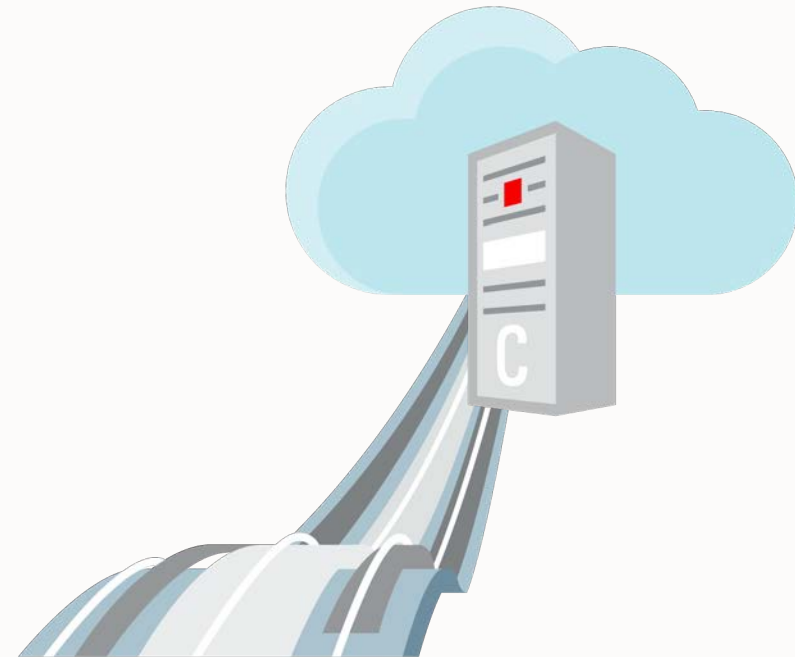




# DevOps

## 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



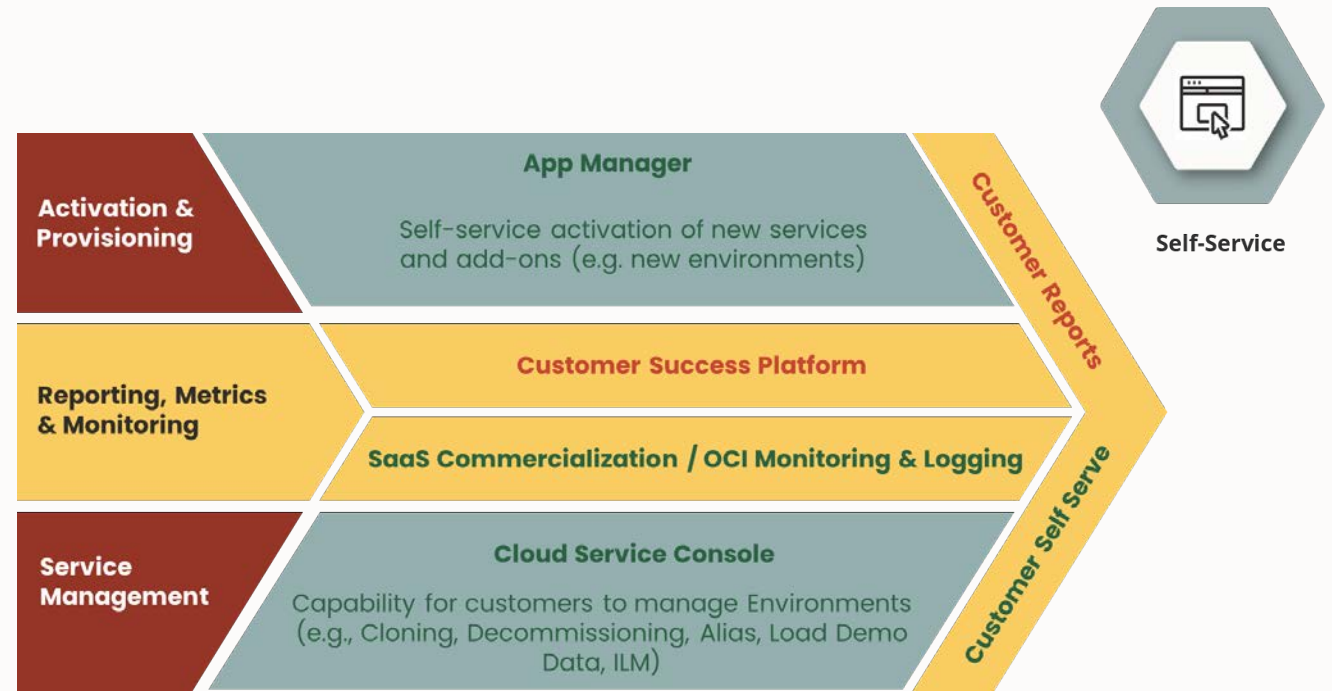
### Benefits:

- ✓ 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

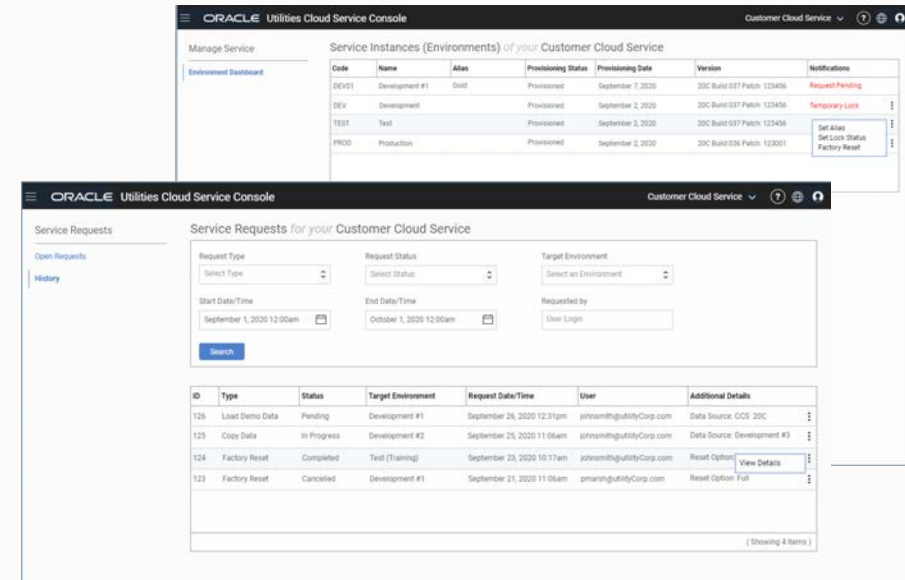
# Self Service

## 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



### 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.



Self-Service

### 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 displays the Oracle Utilities Customer Cloud documentation and training portal. On the left, a navigation menu lists updates: UPDATE 22C (Revision History, Overview, Feature Summary), 22B (Utilities Common), 22A (Utilities Testing Accelerator, Cloud Service Foundation), and 21C (Customer, Meter Solution, Smart Grid Gateway, Utilities Application Framework, System Wide). The main content area features a 'What's New' section for 'Oracle Utilities Customer Cloud Service', a 'Release 22C (Latest)' dropdown, and a 'Get Started with Customer Cloud Service' section with 'User Guides' and 'What's New' cards.

### 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

---







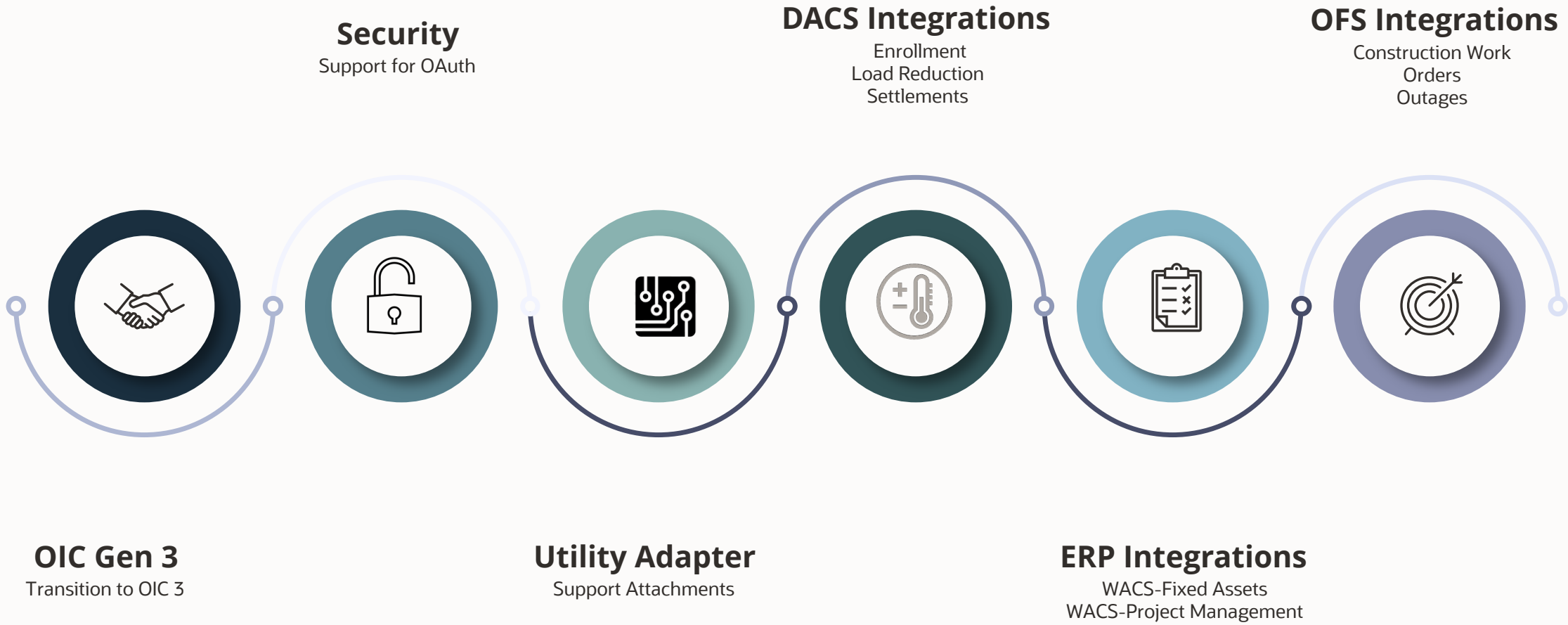
# Oracle Utilities Application Framework Roadmap

## Integrations Update

Vicky Feldman

Director Product Management

# Integrations Focus Area



# Oracle Integration 3

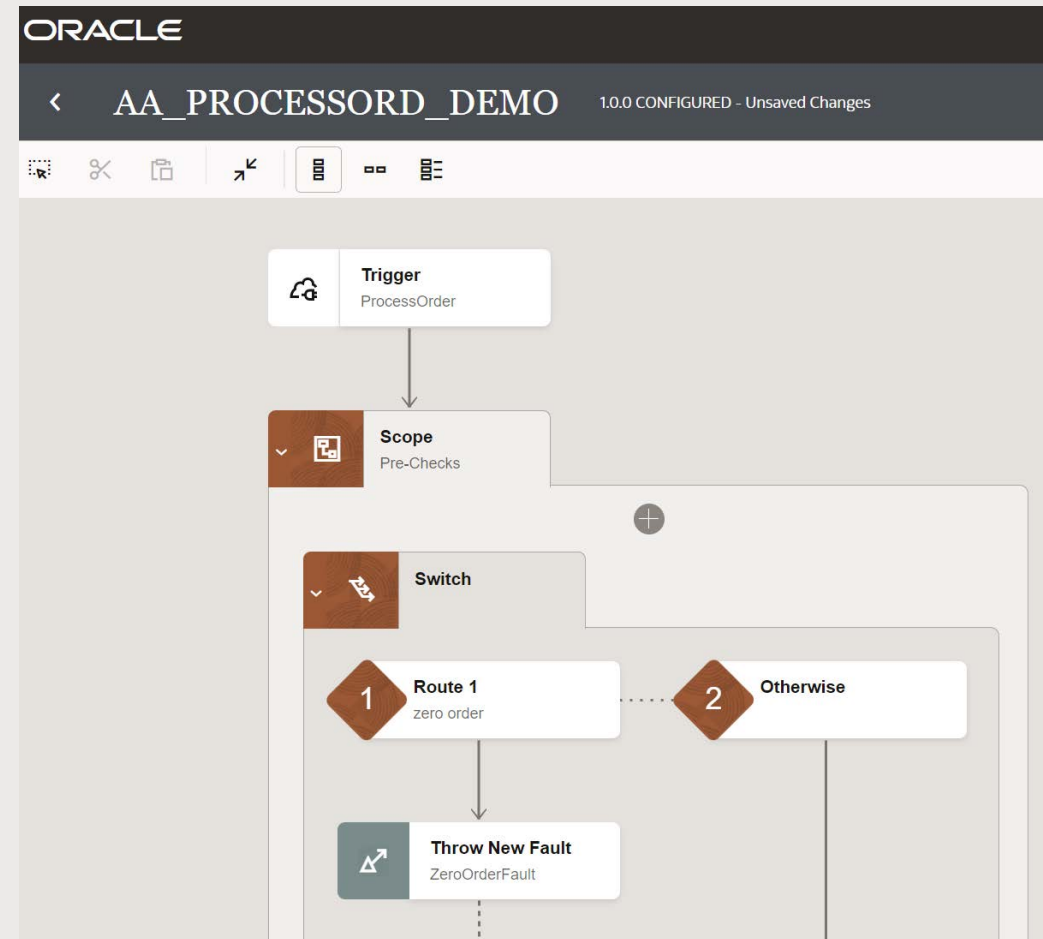
Connect applications and automate end-to-end business processes with OIC Gen 3

- **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

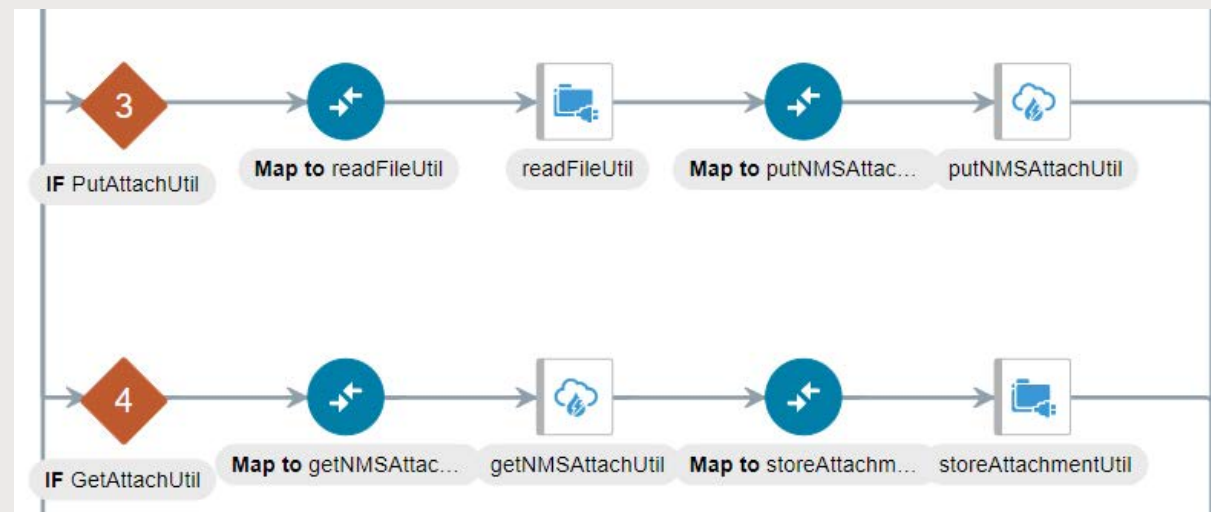
## Ability to send files within REST payload

- **Binary Attachments**

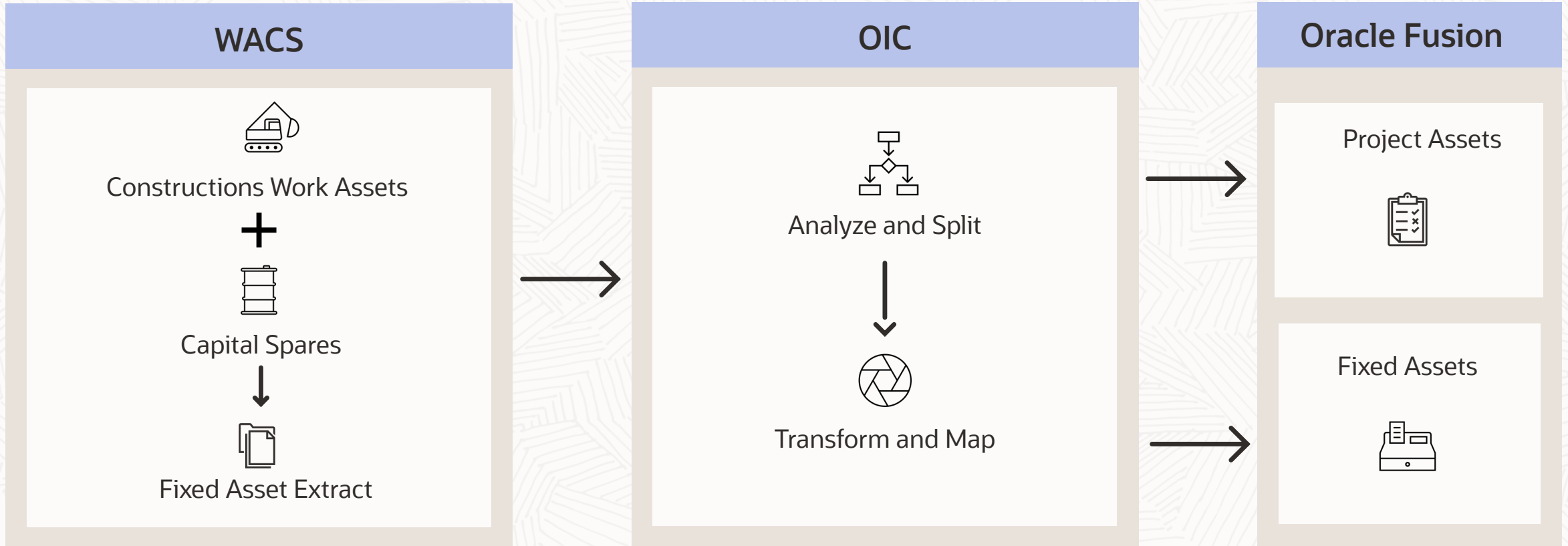
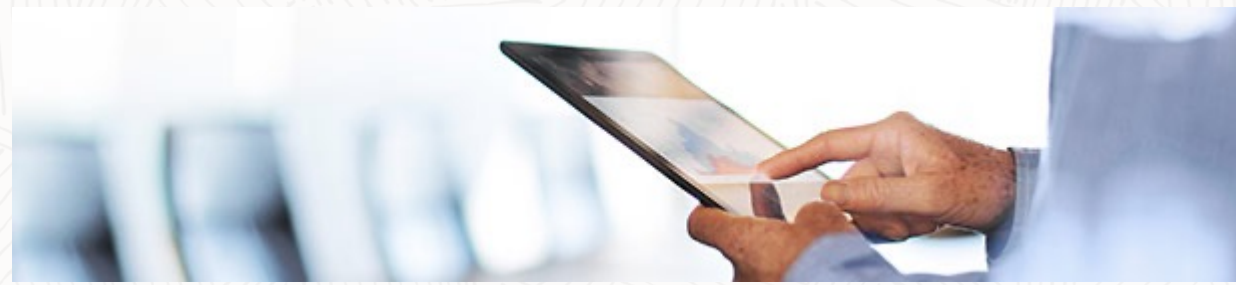
- supports various types, such as such as - image, word, spreadsheet,
- for example, passing activities attachments from NMS to OFS

- **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



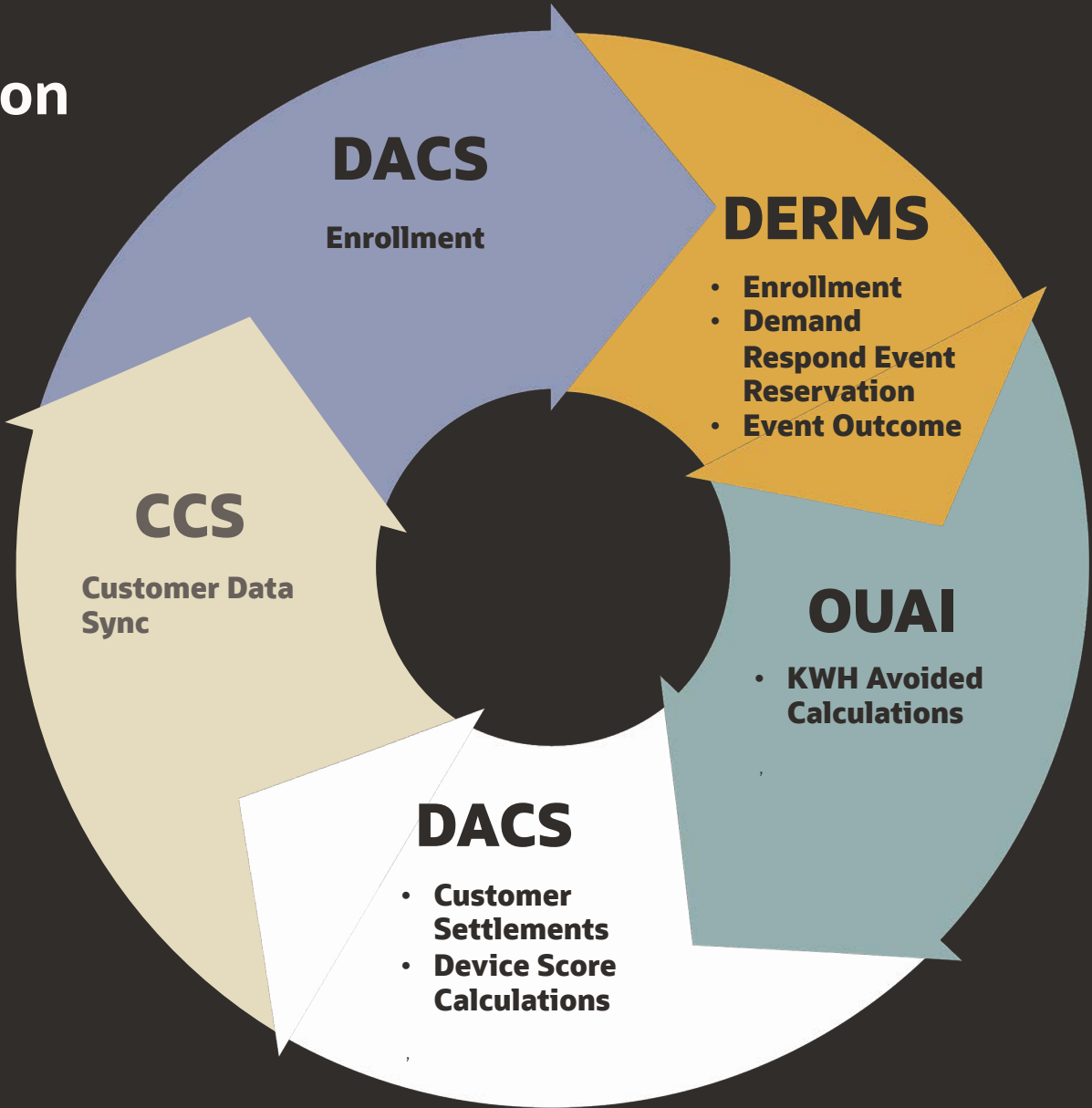


# DACS-DERMS-OUAI Integration

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

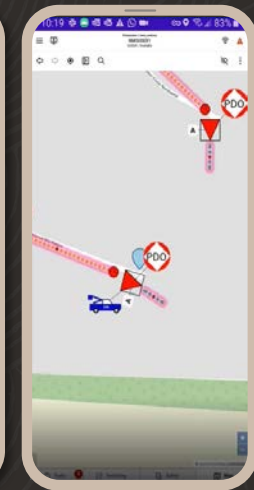
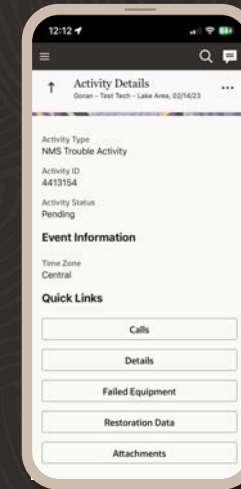
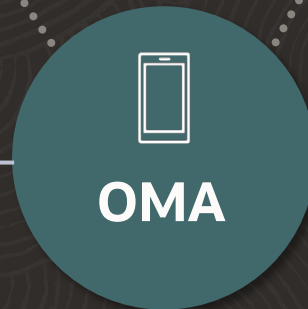


## Field Service

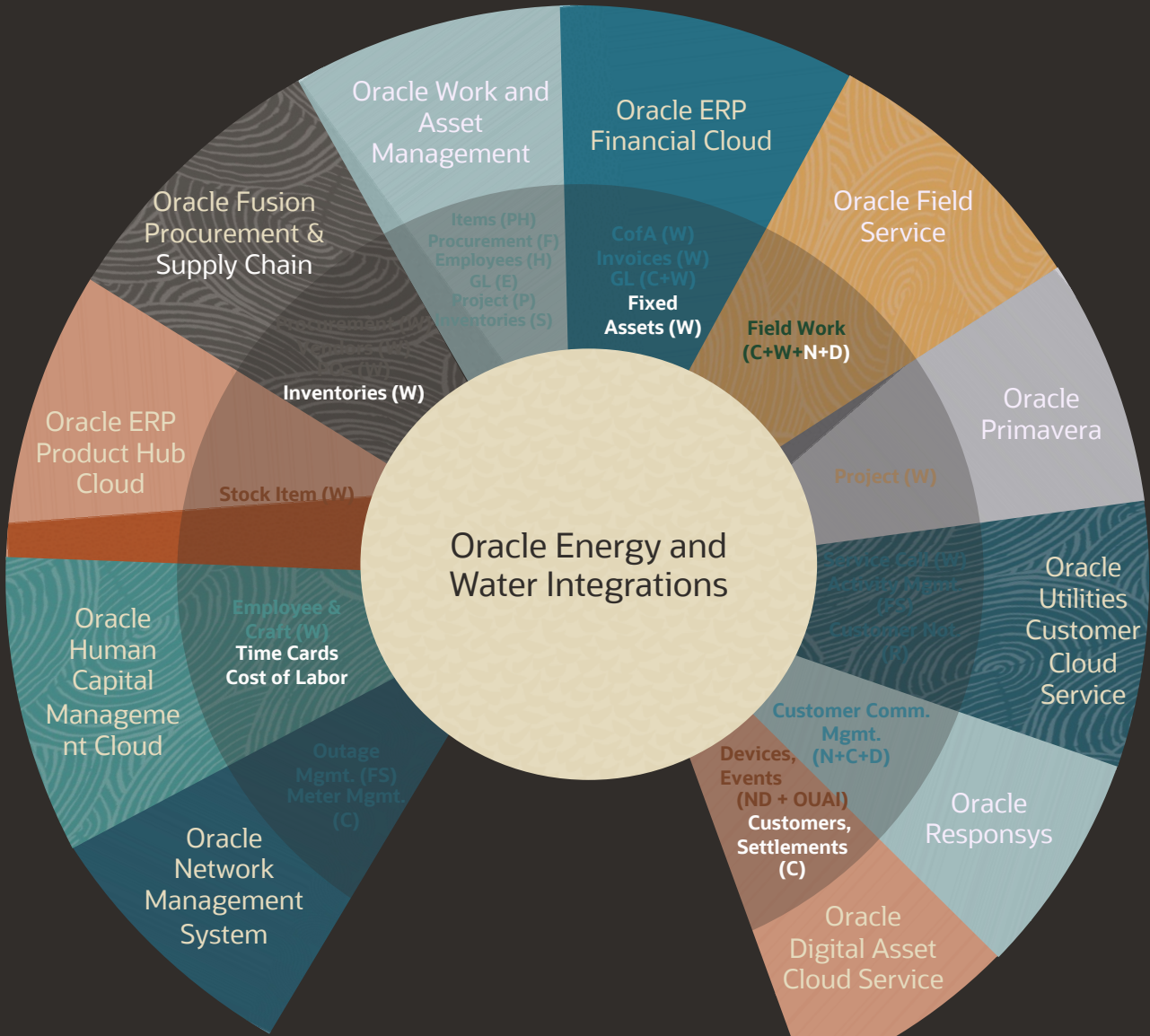
- Scheduling & Routing
- Forecasting
- Booking & Capacity Management
- Field Service Management
- Central Field Management Hub

## Operations Mobile App

- Switching Plans
- Damage Assessments
- Advanced GIS
- ERTs



# 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