Oracle Utilities Work and Asset Management

Release Notes

Release 2.2.0.6.0

F21789-01

October 2019

ORACLE®

Oracle Utilities Work and Asset Management Release Notes for Release 2.2.0.6.0

Contents

Preface

This document provides an overview of the enhancements, known issues, and other changes in Oracle Utilities Work and Asset Management v2.2.0.6.0. The intended audience is anyone installing or using Oracle Utilities Work and Asset Management v2.2.0.6.0.

Related Documents

For more information on this release, refer to the following documents:

Installation Guides
- Oracle Utilities Work and Asset Management Release Notes
- Oracle Utilities Work and Asset Management Quick Install Guide
- Oracle Utilities Work and Asset Management Installation Guide
- Oracle Utilities Work and Asset Management Database Administrator's Guide
- Oracle Utilities Work and Asset Management Licensing Information User Manual

User Guides
- Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management Business User's Guide
- Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management Administrative User's Guide
- Oracle Utilities Work and Asset Management Mobile Application User's Guide

Supplemental Documents

- Oracle Utilities Work and Asset Management Server Administration Guide
- Oracle Utilities Work and Asset Management Security Guide

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text on the screen, or text that you enter.

Chapter 1

Release Notes

Release Notes provides general information about this Oracle Utilities Work and Asset Management release, including new functionality/enhancements, known issues, and other important information.

Refer to the *Quick Install Guide* and *Installation Guide* for information regarding supported platforms and installation steps.

Visit My Oracle Support (http://support.oracle.com) for the most recent service packs and patches for this release to ensure you have the most current version of the product.

This guide includes the following:

- About This Release
    - Relationship Between v2.2.0.6 and Prior Versions
    - Database Changes
    - Upgrade Considerations
    - Deprecated Items
    - Supported Integrations
    - Supported Portals on iOS
- Demo Data Information
- Oracle Utilities Work and Asset Management Enhancements
- Oracle Utilities Application Framework v4.4.0.1 Release Notes
- Oracle Utilities Application Framework v4.4.0.2 Release Notes
- Known Issues

About This Release

This release includes functionality updates for Oracle Utilities Work and Asset Management and Oracle Utilities Operational Device Management:

- Oracle Utilities Work and Asset Management provides functionality to handle large volumes of assets and to manage the receipt, installation, maintenance, tracking and removal of those assets. The system also manages approval processing, tracks purchasing transactions, manages inventory and resources, and tracks costs, accounting and financial transactions.

- Oracle Utilities Operational Device Management provides functionality to handle large volumes of Utilities industry devices and to manage the receipt, installation, maintenance, tracking and removal of those devices.

    Note: Oracle Utilities Operational Device Management is optimized for interoperability with Oracle Utilities Work and Asset Management, however a license for Oracle Utilities Work and Asset Management is required to take advantage of this functionality. Refer to the *Oracle Utilities Work and Asset Management Licensing Information User Manual* for a description of licensing limitations.

The release includes the following components:

- Oracle Utilities Application Framework v4.4.0.2
- Oracle Utilities Work and Asset Management v2.2.0.6.0

Features introduced in this release are highlighted in the Oracle Utilities Work and Asset Management Enhancements section.

- Refer to the *Oracle Utilities Work and Asset Management Quick Install Guide* for a full list of the media pack components and application components included with this release. Also refer to the **Supported Platforms** section in that guide for an updated list of supported platforms.

- Visit My Oracle Support (http://support.oracle.com) for the most recent service packs and patches for this release to ensure you have the most current version of this product.

Relationship Between v2.2.0.6 and Prior Versions

For the complete installation procedure, refer to the *Oracle Utilities Work and Asset Management Installation Guide*.

Database Changes

This release includes database enhancements. For more information, refer to the *Oracle Utilities Work and Asset Management Database Administrator's Guide.*

Upgrade Considerations

This section provides the considerations with respect to upgrading Oracle Utilities Work and Asset Management from a prior version to v2.2.0.2.

As part of the upgrade process, values for the existing Work Category/ Work Class lookups (WORK_CLASS_FLG and WORK_CATEGORY_FLG) will be converted to Admin data. These values can be maintained via their own portals. This allows filtering/ reporting on work at the Activity level.

The following table shows the new admin tables, and the business and maintenance objects for each.

New Admin Table	Tables	Business Objects	Maintenance Object
Work Class	W1_WORK_CLASS (Primary)	W1-WORKCLASS (Work Class)	W1-WORKCLAS
	W1_WORK_CLASS_CHAR	W1-WORKCLASSBUNDLINGADDBO (Bundling Add BO for Work Class)	
	W1_WORK_CLASS_L		
	W1_WORK_CLASS_WORK_CATEGORY	W1-WORKCLASSPHYSICALBO (Physical BO for Work Class)	
Work Category	W1_WORK_CATEGORY (Primary)	W1-WORKCATEGORY (Work Category)	W1-WORKCAT
	W1_WORK_CATEGORY_CHAR	W1-WORKCATEGORYBUNDLINGADDBO (Bundling Add BO for Work Category)	
	W1_WORK_CATEGORY_L		
		W1-WORKCATEGORYPHYSICALBO (Work Category Physical BO)	

Deprecated Items

The Work Class and Work Category flag fields/lookups have been replaced with admin/ maintenance objects with corresponding names. Though deprecated, these fields/ lookups remain in the system but are no longer used.

For more information about the Work Class and Work Category admin tables, refer to the table in the Upgrade Considerations section.

Supported Integrations

The following integrations are supported in this version of Oracle Utilities Work and Asset Management:

- **GIS Integration**
  The GIS Integration uses ESRI GIS software to allow users to view asset layers on a map, and to create and view work requests and work orders on the map.

- **Integration with Mobile Workforce Management**
  Oracle Utilities Work and Asset Management integration with Oracle Utilities Mobile Workforce Management is managed through the Oracle Utilities Field Work Process Integration Pack.

- **Oracle Utilities Work and Asset Management Connector for Enterprise Resource Planning (ERP)**
  The Oracle Utilities Work and Asset Management Connector for Enterprise Resource Planning enables integration of Oracle Utilities Work and Asset Management with a generic set of business processes and data exchanges for implementations with Enterprise Resource Planning systems such as Oracle E-Business Suite, PeopleSoft, JD Edwards EnterpriseOne, Fusion Applications or Enterprise Resource Planning Cloud.

- **BI Publisher Reports Integration**
  BI Publisher Reports allow users to generate and print reports for certain entities, such as operational data, activity reports, purchasing reports, inventory reports and so on. Refer to the Administrative User Guide for more information.

- **Oracle Utilities Field Work Process Integration Pack**
  The Oracle Utilities Work and Asset Management integration with Oracle Utilities Mobile Workforce Management is managed through the Oracle Utilities Field Work Process Integration Pack.

- **Oracle Utilities Analytics**

  - Oracle Utilities Work and Asset Management Analytics for v2.7.x

  - Oracle Utilities Work and Asset Management Extractors and Schemas for v2.7.x

Please refer to the *Oracle Utilities Work and Asset Management Administrative User Guide* or the specific integration guides available on the Oracle Technology Network for more information.

Supported Portals on iOS

The following portals are supported when accessing the WAM application via a browser on Apple iOS devices in this release:

Crew Work-related Portals:

- Work Requests

- Service Call

- Work Order

- Work Activity

- Permit

- Timesheet

- Other Direct Charges

- Construction Work Order

- Construction work Activity

Inventory-related Portals:

- Material Request

- Material Return

- Receiving Receipt

- Receiving Return

- Physical Inventory

- Reorder Review

- Reorder Mass Approval

- Stock Item

- Stock Item Detail

- Stock Transfer

Demo Data Information

The application delivers a demo database based on the application versions provided with the release, including Oracle Utilities Application Framework.

Demo data provides sample configuration and data for key application features. Demo data is delivered as part of the base installation. Refer to the *Oracle Utilities Work and Asset Management Database Administrator's Guide* for more information, or contact Oracle Support.

Oracle recommends that you do not clone the demonstration environment as a basis for a new production environment. The demonstration environment typically includes transactional data that will be irrelevant to your production environment and can cause unexpected issues if it is not purged correctly. The recommended process is to start a new production environment from a new installation and migrate "clean" system data (such as business objects and algorithms) and administrative data (such as sample activity types or other administrative entities) from the demonstration and/or test or development environments as applicable.

Refer to the *Oracle Utilities Work and Asset Management Administrative User Guide* for more information or contact Oracle Support.

Oracle Utilities Work and Asset Management Enhancements

This section describes new and enhanced features in this release of Oracle Utilities Work and Asset Management.

The release includes:

- System Wide Enhancements
- Inventory Enhancements
- Resource Enhancements
- Purchasing Enhancements
- Work Management Enhancements
- Attachments, Documents, and Standard Note Enhancements
- Integration Enhancements
- GIS Enhancements
- Mobile Enhancements
- Meter Data Management / Operational Device Management Integration Enhancements

Note: The **Steps To Enable** sections provide guidelines for enabling each feature, where applicable.

System Wide Enhancements

Menu Updates
The **Data Synchronization** submenu was moved from **Admin** to the **Main Menu** to be consistent with Meter Data Management and Customer to Meter.

The **Inbound Communication** menu was moved from **Work Management** to the **Integration** submenu in **Admin**.

Steps to Enable
No steps are required to enable this feature.

Generic Data Loader
The data loader accelerates the configuration process within Work and Asset Management by quickly loading administration data (such as failure codes, asset types, etc.) from spreadsheets. You will see support for the following in this release:

1. Framework legacy objects without the physical business object column.

2. Replacing existing records that have a list(s).

3. Loading hierarchy of object(s) with a system generated id (for example, Organization) in a single file.

4. Adding child table/collection records, using a non-instantiable business object, to existing primary table records created using a different instantiable business object.

Steps to Enable

An administrator must set up a Request Type using the base Online Loader Request Type business object.

Asset Management Enhancements

Asset Investment Planning

The following enhancements were made to better support the Asset Investment Planning process:

*   Added the **Asset Ownership** field as a lookup to all Asset **Main** sections of the **Asset** portal. This lookup associated to this field includes the **Owned** value.

*   Added the **Asset Performance** tab to the **Asset Type** and **Asset** portals. This tab contains all the fields related to Asset Investment Planning.

*   Moved the **Property Unit** field to the new **Asset Performance** tab.

*   **Useful Life** is auto-computed based on the **Acquisition Date** and **Useful Life of Asset** (if provided). Otherwise, the Asset Type value is used.

*   A log is created for any changes made to the **Asset Performance** fields.

*   When completing an accepting line for Inventory Tracked Asset in Receiving-Receipt, Acquisition Date and Acquisition are stamped on Asset.

*   When completing an Activity Reconciliation, details are stamped on the Asset Investment Planning fields depending on whether they are Constructed or Contributed.

Steps to Enable

No steps are required to enable this feature.

Manufacturer Relocated to Asset Management Menu

The **Manufacturer** menu was moved from **Purchasing** to **Asset Management** to enable you to maintain and associate a manufacturer with an asset specification.

Steps to Enable

No steps are required to enable this feature.

Inventory Enhancements

Enhanced Security Feature to Support Blind Counts Within Physical Inventory\

A common inventory business practices is to perform a blind inventory count. To support this practice, a new security feature has been added to control which users can see on hand quantities when accessing the **Physical Inventory** portal. When this new

application service is applied to a user's security settings (user group), that user can see **On Hand Quantity** for each stock item listed on the physical inventory count list.

Steps to Enable
The administrator must grant access to the user group to use this application service.

Role Information
Generally, only storeroom supervisors should be given access to this application service.

Stock Transaction Log
The Stock Transaction Log enables you to search for stock transactions related to processes that involve inventory stock items and supports the following transaction types: Material Issue, Material Return, Physical Inventory, Inventory Adjustment, Receipt and Accept, and Return and Purchase Return.

The search zone allows you to filter the search results by Storeroom, Stock Item, Transaction Type, and Transaction Date and Time range. The Storeroom or Stock Item and transaction start date and time are mandatory search criteria. The search results contain the Transaction Date and Time, Initiating Object, Quantity, and Unit Price. The results are sorted by the most recent transaction.

The Stock Transaction Log derives the Unit Price of Inventory and Lot Managed Stock Items from actual Stock Transactions. It derives the Trackable Stock Items' unit price from related Financial Transactions. In determining the Unit Cost, this feature counts the tax amount as part of the amount if the "Add Tax to Cost of Inventory" is set to "Yes" in the Inventory Master Configuration

Steps to Enable
No steps are required to enable this feature.

Storeroom Editable When Duplicating Stock Item Detail
You can edit the Storeroom when you are duplicating a Stock Item Detail.

Steps to Enable
No steps are required to enable this feature.

Availability Tab on Stock Item Detail
You can use a new **Availability** tab in the **Stock Item Details** portal. The portal was also reorganized so that the **Stock Item Availability** and **Stock Item Inventory** zones are featured on a new tab.

Steps to Enable
No steps are required to enable this feature.

Resource Enhancements

Improved Display of Contact Name

The contact first and last name are now stored as separate attributes to improve the appearance of the display on the **Service Call**, **Work Request**, and **Communication Log** zones. A new Lookup value, W1LN, was added to the Contact Name Type flag.

Steps to Enable

No steps are required to enable this feature.

Easy Duplication of Employee Availability

A **Duplicate** button appears in the **Record Actions** section in the display user interface of the **Employee Unavailability** maintenance portal. This enables you to duplicate any of the existing employee unavailability records to quickly create a new record.

Steps to Enable

No steps are required to enable this feature.

Purchasing Enhancements

Blanket Contract Line of Purchase Requisition Line from Activity Resource Requirement (APR)

The Blanket Contract Line of the Purchase Request Line is now used as the default when a Purchase Requisition is generated after the activation of a Work Order, Work Activities, or ARR.

If the Purchase Requisition is populated, the default value is derived from the corresponding ARR. Otherwise, the Blanket Contract Line is derived from the Blanket Control Header and Resource Type.

Steps to Enable

No steps are required to enable this feature.

Blanket Contract Line of Purchase Requisition Line Enhancement

The **Vendor Location**, **Blanket Contract Header**, and **Blanket Contract Line List** are displayed in several locations when the Purchase Request Header specifies the Blanket Contract Header.

The Vendor Location and Blanket Contract Header appear as read-only elements on the Purchase Line business objects. The **Blanket Control Line List** appears as a drop-down that contains blanket contract lines that match the resource type of the Purchase Request Line.

Steps to Enable

No steps are required to enable this feature.

Work Management Enhancements

Weekly and Daily Crew Shirt Information String Updates

The information for Crew shift shows the total capacity available instead of just the remaining capacity.

For example: If a weekly shift has 4 daily shifts with 8 hours each and 2 hours are scheduled on the weekly, the information of the weekly shows 30 out of 32 hours remaining. If 7 hours are scheduled to the first daily crew shift, the information shows 1 out of 8 remaining. If nothing is scheduled to the other 3 daily, all show 8 out of 8 remaining.

Steps to Enable

No steps are required to enable this feature.

Service History for Permit

In the enhanced **Service History** zone of a Permit, you can now add Permit Service History records directly to the Permit without an Activity ID and select the Service History Type defined in the Permit Template.

Steps to Enable

No steps are required to enable this feature.

Permits in Template Work Activities

We have expanded the options on the checklist type drop-down on a Template Activity to include "Permit Only." This new checklist type enables you to define permit requirements for Template Work Activities. When you create a Work Order using the Template Work Order, it now includes the "Permit Only" checklist type in the Permit tab of the Work Activity.

Steps to Enable

No steps are required to enable this feature.

Safari Browser iOS Support for Permit Portal

All the functionality introduced as part of Permit enhancement is supported on iPads using the Safari browser. This includes the Permit Class, Permit Template, Permits, Permit Checklist, Permits on Work Activity, and Permits on Construction Work Activity.

Steps to Enable

No steps are required to enable this feature.

Permits for Construction Work

You can associate Permits with Construction Work Activities. A new **Permit** tab on the **Construction Work Activity** portal contains the following zones:

- Permit Checklist
- Permit Attachment

• Permit Service History

You can also use a new search in Construction Work Activity for Permit.

Steps to Enable
No steps are required to enable this feature.

Permit Checklist Based on Permit Template
The Checklist is automatically copied from the Permit Template to the Permit during Permit creation. You can modify the copied Checklist on the Permit.

Steps to Enable
No steps are required to enable this feature.

Default Times for Work Activity Schedule Details
The following date and time fields of the Work Activity Schedule Details now default to the current date and time of the server when values are not entered:

• Activation Date and Time

• Work Window Start Date and Time

• Work Window End Date and Time

This is an Oracle Field Service Cloud integration requirement.

Steps to Enable
No steps are required to enable this feature.

Automatic Updates to Resource Unit Price on Template Activities
The system can automatically update the resource Unit Price for Template Activities.

Steps to Enable
1. Set Resource Type's Default to Activity Flag to "Yes."

2. Plug the Template WO MO Periodic Monitor Process (W1-TMPWO) into the Active state of the W1-TemplateWorkOrderRoot business object.

Capture Blanket Contract Line on Activity Resource Requirement
You can select the specific Blanket Contract Line for a given resource requirement using the Quick Add screen. You can also specify the Blanket Contract Line when editing an existing resource requirement.

In the Quick Add screen:

• The **Blanket Contract Line** appears as a drop-down below the **Blanket Contract** field.

• Selecting a Blanket Contract refreshes the Blanket Contract Line with a list of Blanket Contract Lines that match the resource type of the activity resource requirement. The first Blanket Contract Line in the list is selected by default.

- Selecting a Blanket Contract Line defaults the Unit Price to the values defined on the blanket contract line. For Material Equipment and Other Resource Requirement, the Unit of Measure defaults to the value defined on the Blanket Contract Line.

- Clearing the Blanket Contract Line defaults the Unit of Measure to the value defined on the resource type. For Non-Material Activity Resource Requirements, the Unit Price defaults to the effective Unit Price of the Resource Type.

Steps to Enable
No steps are required to enable this feature.

Track Unplanned Purchases

You can track unplanned purchases for a Work Activity. You can also use items added to the **Unplanned Resource Items** zone for manually entered Purchase Requisitions referencing an Activity. This new zone references the corresponding Purchase Order Line for the unplanned resource. Note that the unplanned resource does not appear under the **Activity Resource Detail** zone.

Steps to Enable
No steps are required to enable this feature.

Permit Requester Field Defaults to User's Employee

The default value of the **Requester** field is set to the user's employee record when creating a Permit.

Steps to Enable
No steps are required to enable this feature.

Attachments, Documents, and Standard Note Enhancements

Consolidated Owned and Reference Attachments in a Single Zone

The **Owned Attachments** and **Referenced Attachments** zones were consolidated into the **Attachments** zone. In the **Attachments** zone, you can create owned or referenced attachments of other objects. This zone also provides the following improvements:

- The Attachment hyperlink navigates to the attachment record instead of launching the corresponding file.

- A new **View** button launches the file or URL associated with the attachment.

- Attachment searches are now simpler to use because we reduced the number of clicks to search and the owning entity's key is now option. You can also search for Common Attachments.

- Standard notes maintenance is now separated from attachments. Standard notes are now managed on selected entities only and use a separate zone.

Other zones that display attachments of related entities were also updated to match the above-mentioned improvements.

Steps to Enable
No steps are required to enable this feature.

New Zone to Manage Standard Notes
Standard Notes are now located in their own zones where they are separated from attachments. Standard Note functionality is now only available in the following portals:

- Stock Item
- Blanket Contract Line
- Purchase Order Line
- Purchase Requisition Line

Steps to Enable
No steps are required to enable this feature.

Exclude Attachments Owned by Inactive Documents from a Mobile or External System
The Document status can prevent attachments related to inactive documents from being shared with an external system or from being sent to a mobile application. It also prevents the addition of file or URL attachments to inactive documents. The business service that retrieves activity attachments sent to a mobile application or an external system now excludes attachments associated with inactive documents.

Steps to Enable
No steps are required to enable this feature.

Integration Enhancements

Oracle Field Cloud Service Integration
You can use prebuilt APIs to support integration between Oracle Utilities Work and Asset Management and Oracle Field Service Cloud. This allows crews to perform work in the field using a mobile device. The APIs enable schedulers to leverage Oracle Field Cloud Service for crew management to schedule and route crews as needed. Maintenance crews can leverage Oracle Field Cloud Service to download a list of assigned work, update work activities with charges such as time spent, and enter in detailed closeout information like failure coding or inspection information.

To support the Oracle Field Cloud Service integration, Interface Timesheet Details and Interface Other Direct Charge Details were enhanced to support an external employee identifier. When it is provided, the external identifier is used to determine the Oracle Utilities Work and Asset Cloud Service's internal employee identifier to capture activity charges by the employee.

Steps to Enable
Refer to the Oracle Utilties Work and Asset Cloud Service - Oracle Field Service Cloud Integration documentation for more information

Primavera Integration

You can use prebuilt APIs to support integration between Primavera P6 and the Oracle Utilities Work and Asset Management. These APIs will offer a way for work planners to visualize and manage their projects within Primavera P6 and utilize Oracle Utilities Work and Asset Management for executing work activities. You can create projects in P6 and link them to a project structures created in Oracle Utilities Work and Asset Management. Once linked, planners can create associated work orders and activities with detailed plans including labor, material, and equipment. Planners can also flag work activities as ready to be sent to P6 for more project planning. The planned Integration layer will leverage these APIs and offer a corresponding work breakdown structure in P6 to allow planners to leverage the planning and scheduling features available in P6. Schedule updates in P6, such as Work activity start and end dates, can then be sent back to the Oracle Utilities Work and Asset Management.

These APIs support the following:

- Project Activity Outbound Sync Request to send the activity information from Oracle Utilities Work and Asset Management to an external system (in other words, activities that are created with Project that has external ID mapped to Primavera Project).

- An Inbound Web Rest Service with two REST operations: one to get the activity details for a given activity ID from an external system and the other to update the Oracle Utilities Work and Asset Management system with window schedule start and end dates for a given activity ID.

- An enhanced **Activity Maintenance** portal to display an Integration Status Message under the **Record Action** buttons. This helps you to understand if and when a work activity was sent to the external system.

Steps to Enable

1. Create a Message Sender for "P6 Work Order Activity." For example:

   - Message Sender: P6WOA

   - Description: P6 Work Order Activity

   - Invocation Type: Real-time

   - Message Class: RTJSONSNDR (Sender for real-time HTTP and JSON messages)

   - Active: Check the checkbox

   - Message Encoding: UTF-8 Message Coding

   - In the Context menu, provide the below details:

     - HTTP Login Password: ***** (Password of the connecting system (P6))

     - HTTP Login User: PIF_API (User ID of the connecting system (P6))

     - HTTP Method: POST

     - HTTP Timeout: 60

     - HTTP URL1: URL of the Connecting system (P6)

2. Create an External System for "P6." For example:

   - External System: P6

   - Description: Primavera

- Our Name In Their System: WAM
- Add outbound message type
  - Outbound Message Type: W1-PRJACTMSG (Project Activity Outbound Message Type).
  - Processing Method: Real-time.
  - Message Sender: P6WOA (Provide the Message Sender created above).
  - Date/Time Format: XSD
  - JSON Conversion Method Base JSON Conversion

3. Create the Master Configuration for "Project Management Integration." For example:
   - Outbound Sync Request B: W1-ProjectActOutboundSyncReq (Project Activity Outbound Sync Request)
   - External System: P6 (Provide the External System created above)
   - Add the outbound message types below under the Outbound Activity Information list based on the usage action:
     - For Add usage, the outbound message type is Project Activity Outbound Message Type (W1-PRJACTMSG)
     - Make similar changes for Update, Delete and Cancel Usages.

Resource Code for Inbound and Outbound Services

Work Order Activity Active Outbound Message now has the resource type code for craft, equipment, other resource, and stock item in addition to resource type identifier. The Inbound services, Interface Timesheet Details and Interface Other Direct Charge Details were also enhanced to support resource type code for craft, equipment, other resource, and stock item.

Steps to Enable

No steps are required to enable this feature.

Capture Activity External ID Provided by External System

When Oracle Utilities Work and Asset Management sends an activity to an external system and the external system's response includes the activity ID, Oracle Utilities Work and Asset Management captures the identifier as the "mobile activity ID."

Steps to Enable

No steps are required to enable this feature.

GIS Enhancements

ESRI 10.6.1 Support

Environmental Systems Research Institute (ESRI) 10.6.1 is now a supported platform version.

Steps to Enable
No steps are required to enable this feature.

GIS IWS REST Services Available

The Oracle Utilities Application Framework introduced a new feature that requires that you configure all the Inbound Web Service (IWS) services explicitly. Geographic Information System (GIS) Map Viewer uses IWS REST services. Due to this, you would have to configure IWS REST services to bring up GIS viewer in the application. As part of this enhancement, all GIS Map Viewer REST services are now delivered out-of-the box and you do not need to perform any configuration.

Steps to Enable
Review the *Oracle Utilities Work and Asset Management Administrative User Guide*.

GIS Work Creation Navigation Changes

The GIS viewer only highlights the asset(s) that are used for creating work instead of showing a list of all work in the work extent. If there are multiple assets that are used while creating a work activity, the primary asset is highlighted in GIS viewer after work activity creation. You can use the "Highlight related assets" tool to highlight all the assets that are involved while creating the activity. While creating work in GIS, if you select the "Add activity to existing work order" option, the GIS viewer displays all assets related to activities that are associated with the chosen work order once the activity is added. When the work request and service call are created, the GIS viewer displays only the created work request and service call on the results panel and highlights the associated asset and work location on the map viewer.

The newly created work record's information string is appended to the widget title, and you can view it when navigating between asset and work widgets. When you click the clear list button or if you initiate a new selection, the work related information string is removed from the widget's title area.

Steps to Enable
No steps are required to enable this feature.

Mobile Enhancements

Support for URL-Based Attachments

With support for URL-based attachments, you can click on a URL to view a document from a mobile device. This requires that are you are connected at all times and log into the document system to view the attachment.

Steps to Enable
No steps are required to enable this feature.

Meter Data Management / Operational Device Management Integration Enhancements

Disconnect Enhancements

For Meter Data Management and Operational Device Management, you can customize the disconnect location look-up. When a device is physically removed in Meter Data Management and synced over to Operational Device Management, you can determine the out-of-service location.

Steps to Enable

No steps are required to enable this feature.

Oracle Utilities Application Framework v4.4.0.1 Release Notes

This section describes enhancements, system data details and deprecation notices in Oracle Utilities Application Framework v4.4.0.1.0 including:

- Web Services Enhancements
- Market Transaction Management
- Application Security Enhancements
- To Do Enhancements
- Integration Enhancements
- Scripting Enhancements
- Miscellaneous Enhancements
- Oracle Utilities Application Framework Deprecation Notices

Note: The **Steps To Enable** sections provide guidelines for enabling each feature, where applicable.

User Interface Enhancements

Error in Business Object Maintenance Dialogue Scrolls

When making change to a business object driven record using the pop-up maintenance dialogue any error message displayed will 'float' or scroll with the page.

Previously, error messages on a pop-up maintenance dialogue were shown at the top of the dialogue. However, if the element in error was located lower on the page and was marked as part of the error, the user needed to scroll to view the error. In this release, the dialogue has been enhanced so that the error message is always visible until the user clicks **Save** or **Cancel**.

Steps To Enable

No steps are required to enable this feature.

Query Filter Area Enhancement

The query data explorer filter area has been enhanced to automatically collapse when showing results to allow for more results to be visible.

In this release, we have introduced functionality in query data explorer zones. If the query results in more than two records, the filter area will automatically collapse to provide more space for the results. An **Expand Filters** button will appear to allow the user to expand and view the filters. When the filters are expanded, a **Collapse Filters** button is visible.

This functionality applies to saved searches as well.

Steps To Enable

No steps are required to enable this feature.

Timeline Zone Redesign

The Timeline zone has been redeveloped to improve the overall look and feel.

The redesign has the following main features:

- The calendar controls have been repositioned to be more in line with the new standards

- Events now appear as a simple circle enclosing the day in the month that the event occurred. Icons are no longer used.

- The information formerly displayed separately as hover text or within a detail section has now been incorporated into a single pop-up window that appears when the user hovers over the event.

- The zone now follows the updated color standards. Note that as part of this it means that the zone no longer supports different colors for background color, text color or icon overrides as in previous releases.

- The underlying structure has been simplified to enhance rendering and accessibility

Steps To Enable

No steps are required to enable this feature.

Market Transaction Management

In this release support has been provided for market transaction management

Several objects are provided to support market transaction management.

- Market Message Type: This object is used to define the different types of market messages, both inbound and outbound and to define the appropriate market message Business Object to use when creating objects of this type.

- Inbound Market Message: This object captures the instance of a market message received from an external source.

- Outbound Market Message: This object captures the instance of a market message that will initiate a message to an external source.

- Market Process Type: This object is used to define configuration related to processes that may be orchestrate related inbound and outbound market messages. It defines the market process Business Object to use when creating market processes of this type. It may also define one or more market process event business objects to initiate events that are generated to support steps within the market process.

- Market Process: This object captures a instance of a market process that carries out business logic for related inbound and outbound market messages.

- Market Process Event: This object is used to orchestrate individual events that may occur to support steps in a given market process.

- Market Configuration: This object may be used to capture configuration needed to support market transactions. Each type of configuration should use a Business Object to define what information needs to be captured. Each type of configuration may define up to five key fields that may be used to uniquely identify an individual configuration instance.

Note that the Framework supplies basic functionality for each maintenance object. Individual implementations and applications may extend this functionality through business objects designed for specific market transaction management business processes.

Refer to the **Market Transaction Management** chapter in the *Oracle Utilities Application Framework Administrative User Guide* as well as related sections in individual application Administrative User Guides for details about what is supported in each product.

Note that the following objects are enabled for Information Lifecycle Management (ILM). Standard ILM crawler batch controls have been provided for the maintenance objects and the maintenance objects are configured with the standard ILM eligibility algorithms.

- Inbound Market Message
- Outbound Market Message
- Market Process
- Market Process Event
- Are steps required to enable? (required)

Steps To Enable
Security administrative users must provide access to appropriate user groups to several new application services listed below.

Application Service	Description	Access Mode
F1-IMCRL	ILM Crawler - Inbound Market Message	Execute
F1INMM	Inbound Market Message Portal	Inquire
F1-MIMMN	Inbound Market Message Monitor	Execute
F1-MKCRL	ILM Crawler - Market Process	Execute
F1-MKMSO	Outbound Market Message Monitor	Execute
F1-MKPRP	Market Process Monitor	Execute
F1MKTCFG	Market Configuration Portal	Inquire
F1-MKTCFG	Market Configuration MO	Add, Change, Delete, Inquire
F1MKTCFS	Market Configuration Query Portal	Inquire
F1MKTMSG	Market Message Query Portal	Inquire
F1-MKTMSGIN	Inbound Market Message MO	Add, Change, Delete, Inquire
F1-MKTMSGOUT	Outbound Market Message MO	Add, Change, Delete, Inquire
F1-MKTMSGTYP	Market Message Type MO	Add, Change, Delete, Inquire
F1MKTPEV	Market Process Event Portal	Inquire
F1MKTPR	Market Process Portal	Inquire
F1-MKTPRCEVT	Market Process Event MO	Add, Change, Delete, Inquire

F1-MKTPRCTYP	Market Process Type MO	Add, Change, Delete, Inquire
F1-MKTPROC	Market Process MO	Add, Change, Delete, Inquire
F1MKTPTY	Market Process Type Portal	Inquire
F1MMTYPE	Market Message Type Portal	Inquire
F1-MPECL	ILM Crawler - Market Process Event	Execute
F1-MPEVRM	Market Process Event Monitor	Execute
F1-OMCRL	ILM Crawler - Outbound Market Message	Execute
F1OUTMM	Outbound Market Message Portal	Inquire
F1PRCQRY	Market Process Query Portal	Inquire

Application Security Enhancements

User Group Services Management Portal
A new portal is provided to manage application service links to user groups.

In this release, we have introduced a new portal **User Group Services Management** portal. This portal provides a list of all user groups. When a security user broadcasts a user group, additional zones appear.

- **Application Services Linked**: This zone shows the list of application services and access modes currently linked to the user group. A user may remove one or more links using this zone.

- **Application Services Not Linked**: This zone shows the application services and access modes that are not currently linked to this user group. A user may add one or more application services/access modes using this zone.

Both zones include filters allowing a user to narrow the results to a subset of records.

Steps To Enable
Security administrative users must provide access to appropriate user groups to the application service used by this new portal.

To Do Enhancements
This section provides information about enhancements to To Do Entry functionality.

Ability to Work On To Do from To Do Management
The **To Do Management** portal now has a **Work** button for each entry in the search results, allowing a user to drill in and work on the To Do entry.

In this release, the **To Do Management** portal (introduced in the previous release) has been enhanced to include a **Work** button for each row in the results. Clicking this button causes the To Do entry to be the user's "current To Do", resulting in the following functionality.

- The user is taken to the page associated with the related object (the "drill key"), or if configured, it launches the BPA script associated with the To Do type.

- The **Current To Do** dashboard zone is populated with this To Do entry. This zone provides a link to view the To Do entry record and provides a button to Complete the To Do. In addition if the To Do entry has related To Do entries, the user may click a link to view the related To Do entries and provides a button to Complete All of the To Do entries.

This new column includes the **Worklist** icon, allowing a user to put all the results in the dashboard's **Worklist** zone. Once records are in the **Worklist** zone, clicking another entry triggers all the code described above. The new entry becomes the "current To Do"; the user is brought to the appropriate page or an associated BPA is launched; and the **Current To Do** dashboard zone is updated accordingly.

Steps To Enable
No steps are required to enable this feature.

Integration Enhancements

More Detail in API Specification for REST Services
In this release, the API Specification generated for REST Services has been enhanced to show more useful, descriptive information.

The API Specification now displays the Inbound REST Web Service' long description at the top of the specification.

In addition, for each element in the schema of the business object, business service or service script referenced by each operation, the API specification shows information based on the element's related Field, if populated. It shows the field's label, field type and field size. In addition, if the field is a lookup, the valid values of the lookup are also displayed.

Steps To Enable
No steps are required to enable this feature.

Scripting Enhancements

Support for Marking an Element in a List in Error
Syntax is provided in XPath scripting for marking an element within a list in the terminate with error statement.

The terminate with error supports 'element=' to refer to the XPath of the element in error. However, previously there was no way to support indicating a list occurrence if the element in question was in a list. In this release, support is provided by moving the proper XPath reference to a variable and then referencing the variable in the element= syntax.

Steps To Enable

In order to correctly reference an element within a list as the element to mark for an error, script writers must update any script to configure the information.

- The 'for' loop should maintain a count of the list occurrence.

- When an error is detected, a move "concat" statement should be used to build the correct XPath syntax for the list occurrence / element to reference, populating a variable.

- The terminate with error statement should use the variable in the element= attribute.

Example:

```
move "0" to $count;
default $elementReference;
for ($list in "parm/hard/newBusinessObject/listName")
move "1 + xs:integer($count)" to $count;

  if //** check some condition for elementName

      move "concat('list[',$count,']/elementName')" to
$elementReference;
      terminate with error (11000, 11000
element=$elementReference);
  end-if;
end-for;
```

Ability to Mark Field in Error for Groovy Script

A new method is provided in Groovy scripting to indicate a field to mark when issuing an error.

In this release, the method `addErrorWithPath` has been added to support issuing an error from a Groovy script and providing a reference to the field in error so that the user interface can correctly mark the field. This syntax supports referencing a field within a list as well.

Steps To Enable

In order to correctly reference an element within a list as the element to mark for an error, script writers must update any Groovy script to use the new method and configure the field to mark. The syntax is documented in the Javadocs for the method.

Miscellaneous Enhancements

Ability to Manually Transition Object Erasure

Users may transition an object erasure record from Pending to Discarded or Erased and from Discarded back to Pending.

Previously a user could only edit an object erasure record and adjust its erasure date. In this release, the user may now transition an object erasure record from Pending to Discarded or Erased and from Discarded back to Pending. As per standard processing, the status transitions may be controlled by application security.

Steps To Enable
No steps are required to enable this feature.

Support a Summary Panel for a Process Flow

A process flow designer may now provide a high level summary panel for a finalized process flow.

When applicable, a process flow may be configured to present the user with a high level summary of the information and events associated with a closed process flow. The summary panel is defined on the process flow type and is optional.

In addition, log records associated with a process flow record are no longer displayed as part of the query portal. They are displayed on a standard log tab on the process flow portal.

Steps To Enable
No steps are required to enable this feature.

New Batch Control Template for Monitor Batch Controls

A new batch control template is provided.

The new template is provided as an easy starting point for implementers to create new monitor batch controls and include the appropriate parameters.

Steps To Enable
No steps are required to enable this feature.

Application Viewer Supported in Chrome Browser

The application viewer is now supported in the Chrome browser.

Note that this was also hot fixed to the 4.4.0.0.0 code line. Refer to bug 29648052.

Steps To Enable
No steps are required to enable this feature.

Status Added to Installed Products Collection

A product status has been added to the **Installation Options - Installed Products** collection.

In this release, a new **Product Status** field has been introduced to the list of installed products in the **Installation Options** portal. It allows the installation step of a multi-product installation to mark one or more products in the 'stack' as inactive, meaning that certain functionality related to that product is 'turned off'.

Steps To Enable
No steps are required to enable this feature.

Oracle Utilities Application Framework Deprecation Notices

This section provides information on functionality that has been removed, is no longer supported by Oracle Utilities Application Framework v4.4.0.1.0, or is planned for removal.

Items Planned for Future Deprecation

This is a list of functionality / system data that Oracle plans to deprecate in a future release.

Append Setting In Pagination

There are several known issues with the functionality of the 'append' option in pagination such that it is not recommended to use this pagination setting. This functionality will be deprecated in a future release.

Support for Master / Subordinate Services for Web Services Catalog

The Service Catalog Configuration (master configuration) supports defining subordinate servers. This functionality is no longer applicable for the Oracle Integration Cloud and will be removed in a future release.

Selected Functionality of the Batch Run Statistics Portal

The **Batch Run Statistics** portal provides some additional information abut batch runs. However, some of the functionality provided on this page is related to capturing additional information from an external tool. This information is stored in a Fact record.

The functionality related to capturing additional information will no longer be supported in a future release. This information will still be available to existing clients, but the functionality will no longer be maintained.

Miscellaneous System Data

- Environment Reference. This administrative maintenance object was related to ConfigLab and Archiving, which are no longer supported. In a future release, the following will be removed:

    - Migration Plan F1-EnvironmentRef. Note that no base migration request references this plan. Implementations should ensure that no custom migration request references this plan.

    - F1-EnvironmentRefPhysicalBO business object

    - ENV REF maintenance object

- The To Do Type F1-SYNRQ (Sync Request Error) is not in use and will be deleted in a future release. Errors for the Sync Request Monitor (that also has the name F1-SYNRQ) are reported using the To Do Type F1-SYNTD (Sync Request Monitor Errors).

- The following metadata related to the legacy LDAP import pages will be removed in a future release: Services CILTLDIP, CILTLDIL, CILTLDIS, Application Service: CILTLDIP

- The following algorithm types and algorithms provided for the current LDAP import functionality do not include any logic. They will be removed in a future release.

    - Algorithm Type / Algorithm F1-LDAPIMPRT

- Algorithm Type / Algorithm F1-LDAPPREPR

- The lookup value CHAR_ENTITY_FLG / F1SE (Characteristic Entity / Sync Request Inbound Exception) is not in use and will be removed in a future release.

- The zone F1-MGRREQDSP will be removed in a future release.

CMA Migration Requests

The migration requests F1-FrameworkAdmin (Framework Admin) and F1-SchemaAdmin (Schema Admin) are no longer recommended and are not going to be updated with new administration / control tables in future releases. The product may deprecate them in a future release.

CMA Import Algorithm

In a future release, the CMA Import algorithm plug-in spot will be deprecated. As an alternative, review any existing algorithms and create appropriate Pre-Compare algorithms.

Business Object Read in F1-MainProc When Pre-Processing Exists

In the original implementation of configuration tools, if a pre-processing script was linked to the business object via options, the main framework maintenance BPA (F1-MainProc) would not perform a Read of the business object (leaving it to the responsibility of the pre-processing script).

In a subsequent release, to solve a UI Hints issue related to child business objects, a business object Read was included in F1-MainProc even if a pre-processing script existed. This solution introduced a problem only visible for specific scenarios and a different fix has been introduced. In the meantime, the business object Read is no longer necessary in F1-MainProc. Since there are many pre-processing scripts that are properly performing the Read of the business object, ideally the business object Read should be removed from F1-MainProc so that multiple reads are not performed.

However, there may have been pre-processing scripts introduced after the business object Read was included in F1-MainProc that were coded to not perform a business object read in the pre-processing script. Due to this situation, the business object Read is still performed as part of the processing of F1-MainProc.

The product plans to remove the business object Read from F1-MainProc logic when a pre-processing script exists. Review your custom pre-processing scripts that are linked to your business object options to ensure that it properly performs a Read of your business object.

Oracle Utilities Application Framework v4.4.0.2 Release Notes

This section describes enhancements, system data details and deprecation notices in Oracle Utilities Application Framework v4.4.0.2.0 including:

- Web Services Enhancements
- Implementation Tool Enhancements
- Accessibility Enhancements
- Miscellaneous Enhancements
- Oracle Utilities Application Framework Deprecation Notices

Note: The **Steps To Enable**, **Tips and Considerations**, **Key Resources**, and **Role Information** sections provide guidelines for enabling each feature, where applicable.

Web Services Enhancements

XSLT Storage in the Database for SOAP Services

In previous releases, you had to store eXtensible Stylesheet Language Transformations (XSLTs) files in the file system. The system now supports creating a Managed Content record for any XSLT that you can reference on a SOAP Inbound Web Service (IWS) or External System/Outbound Message Profile record.

Your decision to use Managed Content as the storage mechanism rather than the file system is a system-wide decision. The product does not support some records referring to XSLTs in the file system and managed content. You can control this setting using a Feature Configuration option on the "External Messages" feature type. If you do not define an option, the default value is that the XSLT will be stored in managed content. For new installations, we recommend storing the XSLT records as managed content.

For backward compatibility, you can use an upgrade script to add the XSL Location feature type and set the value to F1FL (file system). If desired, you can see the steps to enable below for information about adopting the new feature.

Be aware that other locations where XSLTs are defined do not support XSL in the database. This includes XAI Inbound Service and any internal functionality, such as zone type configuration, that uses XSLT. Also, be aware that that the business service that supports sending a real-time email supports providing XSLT names as part of the payload. This functionality does not support a XSLT defined in managed content.

Steps To Enable

By default, the system-wide configuration for upgrading clients is set to indicate that XSLTs used for SOAP IWS records and outbound messages are defined in the file system for backward compatibility. In order to support defining these XSLTs as a Managed Content record instead, you should perform the following steps:

1. Create a Manage Content record for each unique XSLT. If the existing file is 30 characters or less, set the Managed Content code to the same name as the existing file name.

2. Locate the feature configuration record for the "External Messages" feature type and find for the XSLT Location option.

3. Change the value to F1MC from F1FL, or you can simply remove the option as F1MC is the default. Since this setting is cached, be sure you flush the cache.

4. For each SOAP IWS record or external system or outbound message profile record that references an XSLT, confirm the name. Make any necessary changes to the referenced XSLT to ensure that it is referencing a valid Managed Content recorded for SOAP IWS records and outbound messages are defined in the file system for backward compatibility.

REST Web Service URL Update

The published API for REST services was updated to the following URL format:

```
…/rest/apis/{ownerURIComponent}/{resourceCategoryURIComponent}/
{iwsURIComponent}/{iwsOperationURIComponent}
```

The information preceding /rest/ is needed to reference the environment. This part of the URL configuration has not changed and will continue to work like previous releases.

The following provides more information about where the various components:

- **Owner URI Component**: Configured using a new extendable lookup. Each owner flag will define its URI Component and the URL will be built using the URI Component for the owner of the REST IWS.

- **Resource Category URI Component**: A new element on the Resource Category extendable lookup. The product delivered resource categories are updated with appropriate values. For any custom Resource Categories, an upgrade script will populate the new URI Component using the extendable lookup value preceded by a slash. You should review these records and make any desired updates to the value.

- **IWS URI Component**: A new element on the REST IWS record. The product delivered IWS records are updated with appropriate values. For any custom REST IWS records, an upgrade script will populate the new URI Component using the Web Service code preceded by a slash. You should review these records and make any desired updates to the value.

The system will continue to support the REST URL format from previous releases. However, we plan to deprecate that code in a future release. You should plan to review any external REST calls and adjust them to follow the new pattern.

Steps To Enable
No steps are required to enable this feature.

REST Web Services Support Parameters and Additional HTTP Methods

The REST IWS was enhanced to support addition HTTP methods along with path and query parameters. On the IWS operation, the methods GET, PUT and PATCH are now supported. This is in addition to existing support for POST.

The actual actions and functionality that are triggered by a given REST service call are still controlled by the business object, business service, or service script that is configured

on the operation. For example, if you configure an operation with the HTTP method of PUT and you reference a service script that is simply reading a record, the system will perform the action of the service script and read the record. The HTTP methods are meant as external documentation.

In addition to supporting additional HTTP methods, the system also supports designing path or query parameters. When using the HTTP Method of GET, PUT or PATCH, a new child collection for IWS Operation is available for the REST IWS record. The collection is a mapping from the schema element XPath to the text that you want used for that parameter in the URL. In addition, for each parameter, you indicate whether it is a path or query parameter:

- **Path parameters**: Parameters that are part of the endpoint and required. The Operation's URI Component must declare each path parameter surrounded by curly braces. The API for the Inbound REST Web Service will include this notation so that REST callers will know what needs to be provided.

- **Query parameters**: Optional. Parameters that are not part of the endpoint. They are included in the endpoint URL after a question mark and followed by name-value pairs.

Steps To Enable
No steps are required to enable this feature.

Implementation Tool Enhancements

Data Conversion Tools
You can use the following new template batch programs to convert data for enabled maintenance objects:

- **Validation** (F1-CVVAL): Validates the schema and business rules associated with a maintenance object.

- **Key Assignment** (F1-CVASG): When the primary key is system generated, generates new keys for legacy keys for a table.

- **XML Resolution** (F1-CVXML): Resolves converted foreign key references in XML storage fields.

- **Insert to Production** (F1-CVINS): Inserts data to production while resolving legacy keys across physical fields and XML storage fields.

- **Copy to Staging** (F1-CVCTS): Allows you to copy data from production back to staging in order to resolve unique conversion situations that may arise when multiple products are installed.

Steps To Enable
No steps are required to enable this feature.

Key Resources
You can refer to your product's online help for more information about the conversion process. You can refer to your product-specific documentation for more information on the specific maintenance objects enabled for conversion.

Oracle JavaScript Extension Toolkit (OJET) Upgrade

Oracle JavaScript Extension Toolkit (OJET) was upgraded to accommodate security fixes within JQuery.

Steps To Enable

No steps are required to enable this feature.

Tips and Consideration

The new version of OJET also incorporated newer releases of other included libraries. Knockout, one of these new releases, is used for data binding. Knockout uses a JavaScript function to enable this binding, which resembles the following:

```
ko.applyBindings(viewModel, document.body);
```

With the previous OJET and Knockout releases, the applyBindings function only required the view/model parameter. The second parameter, the DOM object, was optional. With the new release, the second parameter is now required. If you have code that omitted this parameter, you will need to add it. If you do not provide it, a message will appear on the console log informing you of the situation. Be aware that while "document.body" is an acceptable parameter, performance may be enhanced if you can provide a smaller portion of the document. For example:

```
ko.applyBindings(viewModel,
document.getElementById('bindContainer'));
```

With the previous release of OJet v3.2, the elements were included on the page by use of the data-bind format. For example:

```
<div id="barChart" data-bind="ojComponent: { component: 'ojChart',
    type: 'bar',
    orientation: orientationValue,
    stack: stackValue,
    series: barSeriesValue,
    groups: barGroupsValue,
    hoverBehavior: 'dim'          }"
</div>
```

This format of definition is still supported by the current OJET v7.1 release. However, a new format of definition called Web Component is available in this release. For example:

```
<oj-chart id="areaChart" type="bar"
orientation="[[orientationValue]]" stack="[[stackValue]]"
data="[[dataProvider]]">
    <template slot="itemTemplate" data-oj-as="item">
        <oj-chart-item value="[[item.data.value]]" group-id="[[
        [item.data.quarter] ]]" series-id="[[item.data.series]]"></
        oj-chart-item>
    </template>
</oj-chart>
```

While the structure appears to be different, the actual functionality and parameter usage are almost identical to the "data-bind" format. Since it provides more functionality (if needed) and performance changes to make rendering faster, we recommend using the Web Component format instead of the data-bind format.

Be aware that OJET v8.0 and later will no longer support the deprecated "data-bind" format. Therefore, updating any OJET code now will provide you with immediate benefits as well as reduce or remove future implementation issues. Details and examples of the Web Component format are provided on the website listed below.

Key Resources
You can refer to the OJET site at https://www.oracle.com/webfolder/technetwork/jet/index.html.

Accessibility Enhancements

Alternate Row Header on Data Explorers
For accessibility, every table in the system should define its row header as the data that uniquely identifies the row. In previous releases, for data explorer results, the first column in the results was automatically designated as the row header. There was no ability for you to designate a different column or multiple columns as the row header. In this release, a new zone column mnemonic has been introduced: rowheader=true. You can use this when designing a data explorer zone if the first column in the results does not uniquely define the row.

Steps To Enable
If you have accessible users and custom zones where the first column does not uniquely define the row, you should consider updating the zone columns to indicate the column(s) that uniquely identify the row.

Alternate Red Text Color Option
There are places in the products where the color red is used for emphasis. The standard red color supported in HTML does not satisfy the accessibility requirement for color contrast minimum when the background is white.

Instead of using color=red or #FF0000 (the RGB color model combination for "red"), we recommend you use the following red shade on a white background: color=#E0292F.

In addition, we provide a new Cascading Style Sheet (CSS) class so that you do not have to remember the code to implement this change. You can use the class textColorRedOnWhite. You can use this UI maps, zone help text, and scripting. For data explorer columns, reference the RGB code.

Steps To Enable
No steps are required to enable this feature.

Tips and Considerations
If implementations are coding their own user interface components and plan to use the color red, we recommend implementing the alternate red color to accommodate any accessible users that may be impacted.

Key Resources
You can reference the new "Accessibility Considerations" section in the Configuration Tools chapter of the online help.

Miscellaneous Enhancements

Date and Time Extracted in XSD Format

By default, date and time fields are retrieved and extracted in an internal "OUA"' format. In this release, various changes were implemented to support indicating that all date and time fields should be converted to standard XSD format:

- The plug-in driven extract batch program supplied by the product was enhanced to include a new parameter to indicate the date format.

- The F1-ConvertXMLToDelimited and F1-ConvertXMLToFileFormat business services were enhanced to include a new parameter to indicate the date format. By default, date and time fields are retrieved and extracted in an internal "OUAF" format. In this release, various changes were implemented to support indicating that all date and time fields should be converted to standard XSD format.

- The plug-in driven extract batch program supplied by the product was enhanced to include a new parameter to indicate the date format.

Steps To Enable

No steps are required to enable this feature.

Market Transaction Management Environment Initialization

If you plan to import market transaction management accelerator metadata, you are required as an initial step to include a new entry in the Installed Products database for the "utility markets" owner flag.

Steps To Enable

You need to submit the F1-IPUM background process. This process has its own F1-IPUM application service that you need to configure for the appropriate user group.

Configuration Updates on ILM-Enabled Maintenance Objects

We added a missing eligibility algorithm and an ILM crawler batch control to the ILM-enabled Process Flow (F1-PROSTR) and Statistics Snapshot (F1-STSSNPSHT) maintenance objects. As per the recommended settings, several maintenance objects that are ILM enabled and are configured with the base ILM Eligibility algorithm by status were updated to configure maintenance object options related to status.

Steps To Enable

Make the feature accessible by assigning or updating privileges and/or job roles. Details are provided in the Role section below.

Tips and Considerations

If any of the settings do not align with your implementation's business rules, you should take steps to adjust the options.

Role Information

The two new ILM crawler batch jobs include new application services: F1-SSCRL and F1-PFCR. Security administrators should add these application services to any user group that is authorized to run the ILM crawler batch controls.

Batch Thread Error Handing Enhancement

Batch jobs may fail because of technical or environmental reasons that are transient in nature, such as an interruption in the availability of the database. With the previous batch implementation, temporary failures would result in the batch thread being marked in Error status and a customer alert. Since these issues cannot always be resolved, batch processing now supports automatic thread resubmission when a failure occurs for technical reasons. The thread will now move to a status of "Interrupted" and the system will attempt a number of retries before moving the thread to "Error."

Steps To Enable

No steps are required to enable this feature.

Oracle Utilities Application Framework Deprecation Notices

This section provides information on functionality that has been removed, is no longer supported by Oracle Utilities Application Framework v4.4.0.2, or is planned for removal.

Items Planned for Future Deprecation

This is a list of functionality / system data that Oracle plans to deprecate in a future release.

Application Viewer

In a future release, we plan to no longer support a standalone application viewer. The functionality will be incorporated into the application:

- Similar to the data dictionary, we will enhance user interfaces for tables and fields to provide more information at a glance and provide a view of links between tables.

- Information displayed for maintenance objects, batch controls and algorithm types and algorithms are already visible in the application.

- Javadocs and Groovy Javadocs will be viewable from within the application rather than launching a separate application viewer application.

REST IWS - Original REST Servlet

The original URL supplied for invoking IWS-based REST services included the IWS Service name in its makeup. We continue to support this for backward compatibility purposes, but we will deprecate it in a future release. As defined in the documentation, you should adjust your existing integrations to use the currently supported URL.

Maintenance BPA Change Warnings to Popup

Currently, the common maintenance BPA used by most of the system displays warnings as errors. This erroneously allows you to make changes to the record before clicking OK. In this situation, the warning conditions will not be checked again for the new changes. We plan on changing this in the future to show warnings as pop-ups. You will be able to

click OK to accept the warning without being able to make any changes. You can click Cancel to adjust the form and resubmit, which will check the warning conditions again.

Append Setting In Pagination

There are several known issues with the functionality of the 'append' option in pagination such that it is not recommended to use this pagination setting. This functionality will be deprecated in a future release.

Support for Master / Subordinate Services for Web Services Catalog

The Service Catalog Configuration (master configuration) supports defining subordinate servers. This functionality is no longer applicable for the Oracle Integration Cloud and will be removed in a future release.

Selected Functionality of the Batch Run Statistics Portal

The **Batch Run Statistics** portal provides some additional information abut batch runs. However, some of the functionality provided on this page is related to capturing additional information from an external tool. This information is stored in a Fact record.

The functionality related to capturing additional information will no longer be supported in a future release. This information will still be available to existing clients, but the functionality will no longer be maintained.

Miscellaneous System Data

- Environment Reference. This administrative maintenance object was related to ConfigLab and Archiving, which are no longer supported. In a future release, the following will be removed:

  - Migration Plan F1-EnvironmentRef. Note that no base migration request references this plan. Implementations should ensure that no custom migration request references this plan.

  - F1-EnvironmentRefPhysicalBO business object

  - ENV REF maintenance object

- The To Do Type F1-SYNRQ (Sync Request Error) is not in use and will be deleted in a future release. Errors for the Sync Request Monitor (that also has the name F1-SYNRQ) are reported using the To Do Type F1-SYNTD (Sync Request Monitor Errors).

- The following metadata related to the legacy LDAP import pages will be removed in a future release: Services CILTLDIP, CILTLDIL, CILTLDIS, Application Service: CILTLDIP

- The following algorithm types and algorithms provided for the current LDAP import functionality do not include any logic. They will be removed in a future release.

  - Algorithm Type / Algorithm F1-LDAPIMPRT

  - Algorithm Type / Algorithm F1-LDAPPREPR

- The lookup value CHAR_ENTITY_FLG / F1SE (Characteristic Entity / Sync Request Inbound Exception) is not in use and will be removed in a future release.

- The zone F1-MGRREQDSP will be removed in a future release.

CMA Migration Requests

The migration requests F1-FrameworkAdmin (Framework Admin) and F1-SchemaAdmin (Schema Admin) are no longer recommended and are not going to be updated with new administration / control tables in future releases. The product may deprecate them in a future release.

CMA Import Algorithm

In a future release, the CMA Import algorithm plug-in spot will be deprecated. As an alternative, review any existing algorithms and create appropriate Pre-Compare algorithms.

Business Object Read in F1-MainProc When Pre-Processing Exists

In the original implementation of configuration tools, if a pre-processing script was linked to the business object via options, the main framework maintenance BPA (F1-MainProc) would not perform a Read of the business object (leaving it to the responsibility of the pre-processing script).

In a subsequent release, to solve a UI Hints issue related to child business objects, a business object Read was included in F1-MainProc even if a pre-processing script existed. This solution introduced a problem only visible for specific scenarios and a different fix has been introduced. In the meantime, the business object Read is no longer necessary in F1-MainProc. Since there are many pre-processing scripts that are properly performing the Read of the business object, ideally the business object Read should be removed from F1-MainProc so that multiple reads are not performed.

However, there may have been pre-processing scripts introduced after the business object Read was included in F1-MainProc that were coded to not perform a business object read in the pre-processing script. Due to this situation, the business object Read is still performed as part of the processing of F1-MainProc.

The product plans to remove the business object Read from F1-MainProc logic when a pre-processing script exists. Review your custom pre-processing scripts that are linked to your business object options to ensure that it properly performs a Read of your business object.

Known Issues

The following section lists known issues and bugs not fixed in this release of Oracle Utilities Work and Asset Management and the Oracle Utilities Application Framework.

This section includes:

- Known Issues Oracle Utilities Application Framework

Known Issues Oracle Utilities Application Framework

The following are the known issues in this version of Oracle Utilities Application Framework which may affect Oracle Utilities Work and Asset Management at the time of release:

- The display of the characteristic value on the **To Do Management** portal has inconsistent behavior for Foreign Key Value characteristics that do not have a search zone. Characteristic values should be displayed like Adhoc Value characteristics. When searching by this characteristic alone, the characteristic value displays properly.

- On the **To Do Management** portal, when saving a search that includes any characteristic value filters, the characteristic value is not retained when opening the saved search.

- Cube Type access should be controlled by the application service associated with the Cube type's "sourcing data" zone. Currently, users that have access to Cube View will see all Cube Types.

- When navigating to a portal with data in context, the search does not execute if the target portal is configured with a query zone.

- Firefox Error dialogs do not open large enough for you to view full the error message.

- Miscellaneous user interface issues, including Label/Data alignment, Help icon positioning, Dates in grids are shifted one column to the left, missing frame around Characteristics grids (Bug #29198401).