Oracle Utilities Mobile Workforce Management

Release Notes

Release 2.3.0.3.0

F11029-01

November 2018

ORACLE®

Oracle Utilities Mobile Workforce Management, Release Notes, Release 2.3.0.3.0

Contents

Chapter 1

Preface

These release notes provide an overview of the enhancements, known issues, and other changes in this release.

Audience

This guide is intended for anyone installing or using Oracle Utilities Mobile Workforce Management 2.3.0.2.

Related Documents

For more information, refer to these Oracle documents:

Installation, Configuration, and Release Notes

- *Oracle Utilities Mobile Workforce Management Release Notes*

- *Oracle Utilities Mobile Workforce Management Quick Install Guide*

- *Oracle Utilities Mobile Workforce Management Server Application Installation Guide*

- *Oracle Utilities Mobile Workforce Management DBA Guide*

- *Oracle Utilities Mobile Workforce Management Hybrid Mobile Application Installation and Deployment Guide*

User Guides

- *Oracle Utilities Mobile Workforce Management Administrative User Guide*

- *Oracle Utilities Mobile Workforce Management Business User Guide*

- *Oracle Utilities Mobile Workforce Management Mobile Application User's Guide (Java-based)*

- *Oracle Utilities Mobile Workforce Management Hybrid Mobile Application User's Guide*

- *Oracle Utilities Mobile Workforce Management Hybrid Mobile Contractor Application User's Guide*

Map Editor Installation and User Guides

- *Oracle Utilities Mobile Workforce Management Map Editor User's Guide*

- *Oracle Utilities Mobile Workforce Management Map Editor Installation Guide*

Supplemental Documents

- *Oracle Utilities Mobile Workforce Management Server Administration Guide*

- *Oracle Utilities Mobile Workforce Management Security Guide*

Abbreviations and Common Phrases

The following abbreviations are used throughout this and other documents provided with the product:

API	Application Programming Interface
CDI	Common Dispatching Interface
ETW	Effective Time Window
GPS	Geographic Positioning System
HTTPS	Hypertext Transfer Protocol Secure
MCP	Mobile Communications Platform
MDT	Mobile Data Terminal
MWM	Mobile Workforce Management
POU	Period of Unavailability
RPS	Resource Planning and Scheduling
SLA	Service Level Agreement
SMS	Short Message Services
UI	User Interface

The use of the word "Company" is used to describe the utility or field service organization that purchased the MWM product. The use of the word "Customer" is used to describe the end use customer of the utility or field service organization, or the entity receiving the service provided.

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 that appears on the screen, or text that you enter.

Chapter 1

Release Notes

This document provides general information about the Oracle Utilities Mobile Workforce Management 2.3.0.3 release including new functionality, known issues and other important information.

Prior to installing this release, it is important that you review all of the release notes and review your business processes as they relate to the new enhancements. There may be steps to complete or information to review before accepting the release. Refer to the quick install guide and installation guide for information regarding supported platforms and installation steps.

This guide includes the following:

Release Overview

The release includes all the components and features previously released in earlier service packs, plus a number of fixes tested and released together. Features introduced in this release are described in the New Functionality section.

- Refer to the *Quick Install Guide* for a full list of the media pack components and application components included with this release.

- Refer to the *Release Notes* available with previous service packs for functionality delivered with those versions.

- 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.

Supported Upgrades

This release supports update paths as indicated below. Please refer to the Oracle Utilities Mobile Workforce Management *Installation Guide* for release v2.3.0.3 included in this release for complete information.

- **Initial Install:** If you are installing Oracle Utilities Mobile Workforce Management for the first time, you can install v2.3.0.3 directly.

- **Upgrade Install:** Oracle Utilities Mobile Workforce Management v2.3.0.3 supports the following upgrade paths:

  - Upgrading from version 2.3.0.2 to version 2.3.0.3

  Customers on 2.2.0.x will need to upgrade to 2.3.0 prior to installing 2.3.0.2 and then 2.3.0.3.

- **Oracle Utilities Application Framework:** Ensure that you have installed the latest version of Oracle Utilities Application Framework v4.3.0.6 as indicated in the *Installation Guide*.

Supported Platforms Notice

See the Supported Platforms section of the Oracle Utilities Mobile Workforce Management *Quick Install Guide* for release v2.3.0.3 included in this release for an updated list of supported platforms.

Changed in Supported Hybrid Mobile Platforms

The following mobile platforms and devices were newly certified in this release:

- Android 8.0

- iOS 11.x, 12.x

- Windows 10 - 1803

Database Changes

This release includes database changes. For more information about these changes, refer to the Oracle Utilities Mobile Workforce Management *Database Administrator's Guide*.

Integration Information

The following integrations are supported in this version of Oracle Utilities Mobile Workforce Management:

- **Oracle Utilities Analytics, 2.6.0 and 2.7.0**
  Please note that the product name for Oracle Utilities Analytics 2.6.0 was formerly "Oracle Utilities Advanced Spatial and Operational Analytics" in previous versions.

- **Oracle Process Integration Pack for Oracle Utilities Field Work 3.1**
  The Process Integration Pack for Oracle Utilities Field Work supports the creation and synchronization of field work records between Oracle Utilities Customer Care and Billing 2.4 and 2.3, Oracle Utilities Work and Asset Management 1.9.1, and Oracle Utilities Mobile Workforce Management.

- **Oracle Process Integration Pack for Oracle Utilities Field Work 12.1**
  The Process Integration Pack for Oracle Utilities Field Work supports the creation and synchronization of field work records between Oracle Utilities Customer Care and Billing 2.5 and 2.4 and 2.3, Oracle Utilities Work and Asset Management/ Oracle Utilities Operational Device Management 2.1.0.0.0, and Oracle Utilities Mobile Workforce Management.

- Oracle Utilities Network Management System 1.12.0.2.0

- Oracle Service Order Management 2.1.0.3

Please refer to integration documentation on the Oracle Technology Network for more information.

New Functionality

The following sections provide details on the new features implemented in this release with a summary of new user interface and functionality enhancements and some implementation and training information. While these notes provide high level configuration information, please refer to the online help and user guides for details regarding configuration and implementation of the enhancements.

- Gantt Enhancements

- Scheduler Enhancements

- Crew Shift Enhancements

- Mobile Application Enhancements

- Miscellaneous Enhancements

Gantt Enhancements

This section provides information about enhancements related to the scheduling Gantt.

Remove Allocation

As of this release, the "Remove Allocation" option from the task right-click menu on the Gantt is available also for dispatched but not yet completed activities.

Plan View Preference

As of this release. the dispatcher may choose the Plan View as their Gantt display preference.

Scheduler Enhancements

This section provides information about enhancements related to the scheduler.

Depot Time Window Capacity Check

By default, the scheduler uses a strict capacity check on Appointment Booking and Conditional Booking requests, failing a request that exceeds a depot time window's capacity even by a small amount.

As of this release, the scheduler provides a new scheduler parameter "Relative Overcapacity (relOverCap)" to enable an alternative cost based option for this these requests. In conjunction with the different cost control settings for different capacities, the new option allows for a configuration that make it harder to exceed some capacities while handling others more flexibly. Refer to the parameter definition for more information.

Relative Shift Compatibility Distance

As of this release, the scheduler provides a new parameter "Relative Shift Compatibility Distance (compatDistByRelativeCost)" to enable relative maximum travel radius for shifts. When enabled, the compatibility distance for a shift is computed as the overall compatibility distance divided by the distance factor specified on its shift cost profile. In order to do so without giving remote crews an advantage over local crews, the Travel Distance Cost should be set to a very low value to make sure that distance cost does not affect the schedule. Actual travel costs can be modeled through travel time costs.

Crew Shift Enhancements

This section provides information about enhancements related to crew shifts.

Audit Changes to Manually Overridden Shifts

Changes made to key shift details are reported on the shift log once a shift has started for auditing purposes. As of this release, these changes would also be reported for a shift that has not yet been started but was updated by a user online.

Audit Force Logoff

As of this release, a force logoff action is reported on the crew shift log for auditing purposes.

Mobile Application Enhancements

This section provides information about enhancements related to the mobile application.

Securing REST Calls

As of this release, all business services and service scripts that are called from the mobile application via the generic REST service must be explicitly white-listed on a designated REST-based Inbound Wed Service (IWS) record. The services are not invoked via this IWS but rather the system uses this metadata as documentation and as a white list to verify that the services are valid to be invoked.

Each product layer that includes additional mobile functionality should have its own IWS record to list the services in question and link their IWS record to the "Mobile Application" web service category. Refer to the "Mobile Application" web service category for more information.

If your implementation have introduced CM owned service scripts that are called from the mobile application, these would need to be referenced on a similar CM owned IWS record.

The following SQL may be used to scan for such CM services if any:

```
-
-- Find calls to CM SS from CM mobile component content
select distinct b.scr_cd
```

```
from
(select m1_component_name_cd,
cast(substr(a.bo_data_area, instr(a.bo_data_area,
'ouml.App.invokeService("script/',1)+31,
instr(substr(a.bo_data_area,instr(a.bo_data_area,
'ouml.App.invokeService("script/',1)+31), '"',1)-1 ) as char(30)) as
scriptName
from m1_mob_comp_cnt a
where a.owner_flg like 'CM%'
and a.bo_data_area like '%ouml.App.invokeService("script/%'
union
select m1_component_name_cd,
cast(substr(a.bo_data_area, instr(a.bo_data_area,
'ouml.App.invokeService("script/',1,2)+31,
instr(substr(a.bo_data_area,instr(a.bo_data_area,
'ouml.App.invokeService("script/',1,2)+31), '"',1)-1 ) as char(30)) as
scriptName
from m1_mob_comp_cnt a
where a.owner_flg like 'CM%'
and instr(a.bo_data_area, 'ouml.App.invokeService("script/',1,2)>0
union
select m1_component_name_cd,
cast(substr(a.bo_data_area, instr(a.bo_data_area,
'ouml.App.invokeService("script/',1,3)+31,
instr(substr(a.bo_data_area,instr(a.bo_data_area,
'ouml.App.invokeService("script/',1,3)+31), '"',1)-1 ) as char(30)) as
scriptName
from m1_mob_comp_cnt a
where a.owner_flg like 'CM%'
and instr(a.bo_data_area, 'ouml.App.invokeService("script/',1,3)>0
union
select m1_component_name_cd,
cast(substr(a.bo_data_area, instr(a.bo_data_area, '"script/',1)+8,
instr(substr(a.bo_data_area,instr(a.bo_data_area, '"script/',1)+8),
'"',1)-1 ) as char(30)) as scriptName
from m1_mob_comp_cnt a
where a.owner_flg like 'CM%'
and instr(a.bo_data_area, 'ouml.OutboundWorker.queueOutbound(',1,1) >
0
union
select m1_component_name_cd,
cast(substr(a.bo_data_area, instr(a.bo_data_area, '"script/',1,2)+8,
instr(substr(a.bo_data_area,instr(a.bo_data_area, '"script/',1,2)+8),
'"',1)-1 ) as char(30)) as scriptName
from m1_mob_comp_cnt a
where a.owner_flg like 'CM%'
and instr(a.bo_data_area, 'ouml.OutboundWorker.queueOutbound(',1,2) >
0
) vw,
ci_scr b
where trim(vw.scriptName) = trim(b.scr_cd)
and b.owner_flg like 'CM%'
and trim(b.scr_cd) not in (select trim(z.schema_name) from
f1_iws_svc_oper z)
/
```

Preview Also Allocated Work

In this release, the "Preview" functionality was enhanced to also include manually allocated
activities (if any) in addition to queued for dispatch tasks.

Carry Over Also When Work Is Declined

As of this release, in a situation where the crew arrives on site, starts to work on their assignment but for some reason has to decline it then any partial activity specific completion information they may have entered is made available to them or to the next crew assigned to complete the activity. This enhancement extends the carry over functionality introduced in the previous release to also handle the decline use case.

Capture Comments For A New Activity

As of this release, the crew may provide comments when creating a new field activity in the field.

Start Date For a New Activity

As of this release, the crew may also provide a start date/time when creating a new field activity in the field.

Larger Comments Field

The activity completion comment is increased to 4000 characters.

UI Rendering Performance Improvement

The processing around rendering a mobile page has been improved to accommodate significantly larger view models. The "getKOData" viewModel function was enhanced to cache data when the page is initially loaded and thus eliminate unnecessary KO binding subscriptions.

Note. In most cases this does not cause any issues, but there might be a rare case where one element depends on the most current data and not what was initially cached when the page was loaded. In this situation, the dependent HTML element needs to explicitly reference the observable element it depends on, and not the cached getKOData value, to enforce the dependency.

Miscellaneous Enhancements

This section provides information about miscellaneous enhancements.

Erasing Mobile Worker Information by Obfuscation

The Mobile Worker entity captures and displays personally identifiable information (PII). Erasing mobile worker information by deleting the records is not advisable as it can cause referential integrity problems. The recommended approach is to obfuscate the data instead. If the Resource maintenance object is configured to be eligible for erasure in your implementation, the system will add an entry to the object erasure schedule when the mobile worker is set to the Inactive state and deactivate an existing erasure schedule record if an inactive record is activated again. Refer to the online help for data privacy and object erasure for more information.

Product Owned Outbound Message Types

As of this release, new Outbound Message Type records are shipped as part of the product. Existing records defined by customers are marked as CM owned and customers may continue and use them as usual.

Web Service Categories

As of this release, Inbound Web Services (IWS) and Outbound Message Type records may be grouped into one or more web service categories for documentation and reporting purposes.

Dispatcher Query

The Dispatcher Query portal is enhanced to show whether or not the dispatcher is set up to handle alerts.

Activity Search By Service Class

The Activity Query portal is enhanced to support search by service class. A new optional Service Class filter was added to the existing general information, due date, scheduled date query options.

Search Alert By ID

The Alert Query portal is enhanced to support a search for an alert by its identifier.

Depot Cutoffs Zone

The Cutoffs zone on the Depot portal is enhanced to display whether the cutoff request was generated or not.

Known Issues

This section lists issues that were found but not resolved in both Oracle Utilities Mobile Workforce Management and Oracle Utilities Application Framework at the time of release.

Oracle Utilities Mobile Workforce Management Known Issues

The following table lists known issues in Oracle Utilities Mobile Workforce Management version 2.3.0.3 at the time of release.

Bug Number	Description
21528065	When all activities that belong to a dispatched depot task are recalled and removed from the run, the depot task itself still remains on the device when it should be canceled.
24823046	A few minor issues related to the right-to-left translations exist.
27234813	A POU Template that is defined to expire by number of occurrences keeps generating an error at the time when no POUs have been generated yet by the time the template has expired. The generation algorithm should have transitioned the POU to expired state.
27241077	If a shift completion message sent from a mobile device encounters errors such that by the time it is reprocessed the crew record is marked inactive, the message would fail to process automatically. The system raises a To Do entry, as usual, for a user to review this situation and manually cancel the message. The system should not fail such message in that situation.
27404988	While scheduling two or more runs from different depots to the same shift, the scheduler will collapse them into a single one. That collapsing mechanism does not take into account the overloading of the depot time window capacity.

Oracle Utilities Application Framework Known Issues

The following are the known issues in this version of Oracle Utilities Application Framework at the time of release:

- The Application Viewer is not supported on the Chrome browser.

- 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.

- The message "weblogic.rjvm.BubblingAbbrever$BadAbbreviationException: Bad abbreviation value: '243'" appears in the Weblogic console log, but there is no known impact to the application and it can be ignored.

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

Deprecation Notices

This section describes items that are deprecated in this release or planned for deprecation in a future release, including:

Legacy Mobile Application

This release supports both the Java-based legacy MCP and the new Hybrid MCP. Support for the legacy MCP will continue through the end of Premier Support for this release (March 2021), or until any of the underlying technologies of the legacy MCP go out of support, which we have no control over. The legacy MCP will not be supported past March 2025, the Premier Support end date for the base application.Please start planning for this upcoming deprecation of the legacy MCP and convert your custom mobile applications, if any, onto the new Hybrid platform.

Connected MCP

The Connected MCP mode is only available using the old Java-based MCP (it is not available with the Hybrid MCP). The Connected MCP mode will be deprecated along with the Disconnected Java-based MCP.

End of Support Notices

- WebLogic Server 10.1.3 is no longer supported. Users must use 12.2.1.3+.

- iOS 9 is no longer supported for MCP.

- Integratin with Oracle Utilities Analytics 2.5.0 is no longer supported.

- Connected MCP is no longer supported on any Windows or Android platforms.

Oracle Utilities Application Framework v4.3.0.5 Release Notes

This section describes enhancements, system data details and deprecation notices in Oracle Utilities Application Framework v4.3.0.5.0 including:

- Introduction of Mobile Framework
- System Wide Enhancements
- Configuration Tools Enhancements
- Web Service Enhancements
- File Access Enhancements
- Miscellaneous Enhancements
- Oracle Utilities Application Framework System Data Details
- Oracle Utilities Application Framework Deprecation Notices

Introduction of Mobile Framework

The product has been enhanced to provide a framework to support integration with mobile devices. The mobile framework consists of the Oracle Utilities Mobile library (OUML) of APIs that supports the various application layers responsible for business functionality. A mobile application built on this framework may use HTML5 and JavaScript to implement business logic, render the user interface and interact with mobile device services as well as leverage RESTful services to facilitate communication with the application server.

This release of the Mobile Framework supports the following:

- Mobile spplication with support for iOS and Android containing the runtime for the product. Note: The OUAF mobile application will be rebranded for each product that uses it.

- Mobile Server application that can be deployed standalone or with an existing implementation. It is disabled by default.

- Mobile objects have been transferred to the Framework with the following exceptions:

- Geographical Map Services are not available in this release

- Sending Mail to mobile devices is not available in this release

- GPS tracking is not available in this release

- Deployment Formats are fixed in this release

This release of the Mobile Framework is restricted to be used for intranet applications and used for product-provided content only.

System Wide Enhancements

Weblogic and Native Mandatory Upgrade

Special Notes for Upgrading from a Weblogic 12.1.3.x Environment

If the customer is upgrading from an environment which is using Weblogic 12.1.3.x the following the steps are required prior the installation:

1. Install Oracle WebLogic Server (Fusion Middleware Infrastructure) 12.2.1.x

2. Install Oracle Java SE Development Kit 1.8.0_x (if not installed yet).

3. Shutdown the Application Server Environment.

4. Take a full backup of the application $SPLEBASE

5. Set the environment: splenviron.sh -e <ENV NAME>

6. Reconfigure the environment in order to point to the new Weblogic and Java (if upgrade Java as well):

   • Execute: configureEnv.sh –i

   • Update: "Web Java Home Directory" and "Web Application Server Home Directory"

   • Type <P> to process (no need to rerun initialSetup.sh)

7. Set the environment again: splenviron.sh -e <ENV NAME>

8. Upgrade the Oracle Utilities Application Framework to version 4.3.0.5.0 using the installSP.sh script.

Special Notes for Upgrading from a Weblogic Embedded Installation

If the customer is upgrading from a Weblogic Embedded installation, the upgraded environment needs to be deployed as Weblogic native instalation. Refer to the following white papers for more details:

   • *Native Installation Oracle Utilities Application Framework* (Doc Id: 1544969.1)

   • *Implementing Oracle ExaLogic and/or Oracle WebLogic Clustering* (Doc Id: 1334558.1)

Removal of XML Application Integration and Multi-Purpose Listener

The XML Application Integration (XAI) Servlet and Multi-Purpose Listener (MPL) were announced as planned for deprecation in V4.2.x, the capabilities have been disabled by default in this service pack in anticipation of the physical removal of these capabilities in 4.3.0.6.0. It is highly recommended that customers using these capabilities migrate to the alternatives provided:

   • XAI Inbound Services should be migrated to the Inbound Web Services capability. Refer to the *Migrating from XAI to IWS* whitepaper (Doc Id: 1644914.1) available from My Oracle Support for details of how to migrate.

   • If Oracle Service Bus is not desired, MPL-based configuration should be migrated to the provided Oracle Service Bus integration capability or an equivalent alternative. Customers migrating to Oracle Service Bus should refer to the *Oracle Service Bus Integration* whitepaper (Doc Id: 1558279.1) available from My Oracle Support.

As a reminder, XML Application Integration (XAI) Servlet and Multi-Purpose Listener (MPL) will be removed in 4.3.0.6.0 and therefore not available from that release going forward.

Change in Multi-Language Support

In previous releases, the New Language batch program (F1-LANG) would insert new language rows for based owned system data using the owner flag of the main record. This prevented an implementation from adjusting the translatable text for the new language. Implementations should be able to modify translatable strings for base owned system data under the following circumstances

   • The implementation does not plan to use a language application pack.

- There are new base owned system data records that were added as part of a patch / hot fix. The translation packs are provided only with service packs. For the time between applying a hot fix and getting the updated language pack, an implementation may decide to temporarily update one or more translatable strings.

In this release, the New Language process has been changed to use the owner flag of the installation when creating new language rows. This allows implementations to translate the descriptions into the desired language.

Note that when applying a language pack, the language pack updates all language entries for base owned system data. If your implementation updates base owned labels and descriptions prior to applying the language pack, they will be overwritten. Note that most user facing labels and messages support defining an Override Label or Override Description. This information is not updated by the base product and should be utilized if your implementation has a desired label or description that the user sees.

Support for Mozilla Firefox and Chrome for Business

Mozilla Firefox Support

In 2011, Mozilla switched Firefox to a rapid release cycle with a new release coming out every six weeks. In the interests of stability and cost reduction, Oracle uses the Mozilla's Extended Support Release (ESR) channel for certification. Mozilla's ESR releases come out every 12 months on average.

Maintenance of each ESR, through point releases, is limited to high-risk/high-impact security vulnerabilities and in rare cases may also include off-schedule releases that address live security vulnerabilities. Backports of any functional enhancements and/or stability fixes are not in scope.

At the end of the support period for an ESR version:

- The release will reach its end-of-life

- No further updates will be offered for that version

- An update to the next ESR version will be offered through the relevant channels

If you choose to use the Firefox personal releases and report compatibility issues with Firefox personal releases that cannot be reproduced with Firefox ESRs, your options are:

- Deploy a certified Firefox Extended Support Release version instead of the Firefox personal version

- Report the incompatibility between Firefox ESR and Firefox personal to Mozilla

- Use a supported alternative browser until Mozilla resolves the issue

Chrome for Business Support

Chrome is also released on a rapid release cycle. Chrome updates average out to a new release every six to eight weeks. Google does not offer an equivalent of Mozilla's annually-updated ESR option for Chrome, but offers a corporate focused Chrome for Business program. The product is certified using the Chrome for Business version of Chrome as it offers a more stable and configurable experience.

Oracle is unable to test every new version of Chrome with every product release every eight weeks. We expected that we will certify selected Chrome for Business releases on a regular ongoing basis.

If you report an issue with a later version of Chrome that we have not documented, you may be advised to:

- Use Internet Explorer or Firefox as a backup browser

- Wait for the next version of Chrome

Also note that the Application Viewer is not currently supported via Chrome.

Version Support

The versions quoted in the Installation Guide and/or certification matrix represent the minimum version support at the time of release or certification as tested by Oracle. In line with Oracle policy the following support policies apply:

- Oracle supports browser versions supported by browser vendors. Unless otherwise advised, browser version support may be withdrawn when the browser vendor withdraws support for a particular version.

- If you choose to use an later version of a supported version of a browser, it is highly recommended to test that version against a non-production version before deploying against production environment to reduce the risk of issues.

- If an issue arises in the later browser version, it is recommended to check My Oracle Support for any patches that may address the issue before registering a Service Request with Oracle. Patches may be provided or advice for a workaround, including using certified versions or alternatives.

Ability to Minimize Dashboard when Launching the System

A new URL parameter has been provided to minimize the dashboard while launching the system.

> http://system-server:1234/cis.jsp?**minDashboard=true**

This parameter may be useful when the system is being launched with a script that navigates to a particular record and where the zones on the user's dashboard include a lot of information by default. The user may want to suppress the dashboard for usability and performance reasons.

Note that this was fixed in previous releases via a hot fix. It was fixed in 4.3.0.4.0 (Bug 26969586).

Consolidate User Logs for Clustered Environment

Implementations may now define a directory that is used to consolidate business log files for multiple nodes in a clustered environment. Note that this expected to only be applicable to cloud environments.

Configuration Tool Enhancements

The following sections highlight enhancements to the configuration tools functionality.

Groovy Scripting Improvements

A new "Groovy Imports" script step type has been added. This step allows a developer to define classes to be imported so they may be used in Groovy Members and Groovy Library Interface steps without having to reference the fully qualified package name. The new script step type is available in Plug-in Scripts, Service Scripts and Groovy Library Scripts.

Schema Designer Improvements

This release adds a new Schema Designer zone. The new designer provides a more intuitive WYSIWYG interface and enhanced editing and viewing capabilities.

New Reusable Map Fragment / Data Area for Displaying PK Values

For portal based maintenance pages that display the main details of an object, the product standard for displaying primary keys is to show system generated keys in a Record Info section. This release adds a new map fragment to automatically display the primary key labels and values.

In addition, a new Data Area (F1-InfoCommonWithPK) has been provided that includes the **Record Info** section definition, this new map fragment (F1-PkRecordInfo) and the existing F1-RecordInfoFusion map fragment that shows other common fields in the **Record Info** section such as Business Object and Create Date / Time. Business object schemas may include the new Data Area to get the standard **Record Info** details, including the primary key info.

Allow Status without BO on Monitor Batch Program

The monitor batch program supports providing a business object and status as input to limit the records that match those values. In previous releases, the Status could not be provided as input without also providing the business object. For use cases were multiple business objects exist but with common status values, the restriction required a proliferation of batch programs in order to restrict by status. In this release, the program has been enhanced to allow Status to be provided as input without requiring the business object.

Note that this enhancement has also been implemented in the 4.2.0.2.0 code line (via a hot fix bug 25809002) along with all interim code lines.

Display of BO Options Adjusted

There is a set of framework supplied BO options that apply to business objects for all maintenance objects. The remaining framework supplied BO options (and all BO options supplied by individual products) are specific to certain maintenance objects (MO) and should only be visible if the corresponding MO has configured it in the **Valid BO Option** MO option.

In previous releases, some of the MO specific BO option types were incorrectly displayed for all BOs, not just for the MOs that configured the option appropriately. This has been corrected. In this release the only options that should be visible to a BO are the ones configured as valid in the MO, plus the following 'common' options:

- F121 - Framework Version 2.1 Compatibility Mode
- F1AM - Actions Zone UI Map
- F1AS - Actions Zone Service Script
- F1AX - Related Administration BO
- F1BX - Related Transaction BO
- F1DU - Display UI Map
- F1IA - Inactive Algorithm
- F1MB - Maintenance BPA Script
- F1NO - Portal Navigation Option
- F1PO - Post-Processing Service Script
- F1PR - Pre-Processing Service Script
- F1SR - Status Reason Business Object
- F1SS - Display Map Service Script
- F1UU - Maintenance UI Map

Upgrade Note: In case an implementation used an MO specific BO option type for a BO where the product has not configured that option to be valid on its MO, an upgrade script will add an entry to the MO Option of type Valid BO Option for that MO.

Optimize Referencing OJET

In this release a new UI map fragment (F1-OJETLIBS) has been created to isolate references to Oracle JavaScript Extension Toolkit (OJET) libraries to be used by UI maps that take advantage of OJET widgets. UI maps should include this map fragment rather than declaring the OJET libraries directly. This allows for updates to the references to OJET libraries for OJET upgrades to be done in a single place. Note that implementations are discouraged from using OJET widgets that are not used by the product. The product does not test every available OJET widget.

Note: This was fixed in previous releases via a hot fix. It was fixed in 4.3.0.4.0 (Bug 25507178).

Integration / Web Service Enhancements

The following sections highlight changes to various integration and web service functionality.

Support for Base Delivered Outbound Message Types

In this release, Owner Flag has been added to Outbound Message Type. In addition, business object has been added to the table and the maintenance object has been converted to one governed by a business object. Note that the outbound message type already has a column for business object (BUS_OBJ_CD), which represents the BO for the related Outbound Message. A new column has been added for the outbound message type's BO (TYPE_BUS_OBJ_CD).

In addition, the user interface has been converted to portal / zone based user interface using separate query and maintenance portals. A base business object has been introduced: F1-OutboundMsgType. This business object is configured with appropriate user interface configuration.

Upgrade Note: An upgrade script populates the new business object column for all existing outbound message types with the above base BO code. In addition, all existing outbound message types are updated with an owner flag value of CM (customer modification).

Note that the product had previously released a business object for outbound message type (F1-OutboundMessageType). The configuration for this business object is not compatible to be used as the identifying BO of the record. As such, it has been marked to not allow new instances. Any code that uses this BO to read outbound message type information will continue to work properly. However, the BO should not be used in the new business object column on the record.

Support for Web Service Categories

In this release, a new administrative object has been introduced: Web Service Category. This object includes a collection of web services that are associated with the category. The system supports links to one of the following web service objects:

- Inbound Web Service

- Outbound Message Type

- XAI Inbound Service (for those installations that are configured to support XAI deployment via IWS).

A given web service may be associated with more than one category.

The product has provided the following Web Service Category values in base. A specific product may deliver additional web service categories:

- F1-ADMINISTRATION - Administration

- F1-COMMUNICATION - Communication

- F1-IMPL-TOOLS - Implementation Tools

- F1-INTEGRATION - Integration

In addition, base delivered inbound web services, outbound message types, and in some cases XAI inbound services are delivered with web service categories configured.

Support Custom Namespace

In this release, the product has been enhanced to support defining a custom namespace for SOAP messages.

To enable this functionality:

- Configure a context entry on the SOAP Sender with context type of Message Namespace URI and context value set to the namespace value.

- On the External Message, for each message configured for this SOAP Sender, set the Namespace Option to "Configured on Sender".

Description Required on Inbound Web Service Objects

In this release the description field for Inbound Web Service, Annotation and Annotation Type have been made required for both the Table / Field configuration and on the base delivered business objects.

Support Oracle Web Services Manager for Outbound Messages

In this release, the product supports using the Oracle Web Services Manager (OWSM) for web service policy management for outbound messages and specifically, using the OAuth Policy Set.

Note that as part of this functionality, the existing sender context type SOAP Username Security Type (value UNTS) has been converted to a more generic context type Sender Security Type (value STYP). Any existing senders that refer to the UNTS context type will be upgraded to refer to the new more generic context type. The new context type supports the existing values (BASIC, DIGEST, TEXT) and now support a new value (OWSM).

Refer to the online help for more details about configuring the OWSM security policy.

Note that this enhancement has also been implemented in the 4.3.0.4.0 code line (via a hot fix bug 25816274).

OWSM Protection for REST Services

In this release, inbound REST services may be secured with OWSM policies. If OWSM is chosen using a property setting, an appropriate default is selected by the configuration utility. Implementations may opt to change the default policy configured, if desired. Refer to the Server Administration Guide and the Security Guide for more information.

Support for including the PK in Outbound Message Payload

In this release, the system has been enhanced to support including the Outbound Message ID in the payload. There is no opportunity for an algorithm linked to the outbound message to populate an element in the outbound message payload with the generated outbound message ID. If your implementation would like to include the outbound message id, configure a BO option that

references the XPath of the element to update and the system will populate the element with the outbound message ID prior to routing the message.

Refer to the *Define the Outbound Message Business Object and Type* topic in the online help for more information.

Note that this enhancement has also been implemented in the 4.3.0.2.0 code line (via a hot fix bug 25419076) along with all interim code lines.

Dynamic URL for Outbound Message

In this release, the system has been enhanced to support building a URL for an outbound web service that includes dynamic data (instance data). Two new mnemonics may be defined in the URL for the outbound message's Sender:

- ${pathParms}
- ${queryParms}

These mnemonics signal to the system that information provided in the outbound message record should be used to replace these mnemonics at run time.

The enhancement also provides a new data area where the elements used to capture this dynamic data are defined. Any outbound message that requires this dynamic URL creation should include the new data area in the outbound message BO's schema. In addition, the code used to initiate the outbound message must populate the data that should be used to replace the mnemonics in the URL.

Refer to *Define the Outbound Message Business Object and Type* in the online help topic for more information.

Note that this enhancement has also been implemented in the 4.3.0.3.0 code line (via a hot fix bug 25201396) as well 4.3.0.4.0.

Ability to Add SOAP Header Parameters to Outbound Messages

In this release, the system provides support for adding SOAP header parameters to outbound messages.

To support this capability, the BO for the outbound message must include the data area F1-OM-DynamicConfig. This data area includes the element soapHeaders. At runtime, when creating an outbound message, whatever is populated in that element will be added to the SOAP header section of the outgoing SOAP request.

Note that this enhancement has also been implemented in the 4.3.0.3.0 code line (via a hot fix bug 25119728).

File Access Enhancements

The following sections highlight enhancements related to accessing files.

Substitution Variable Automatically Added for SPLOUTPUT

A previous release provided the ability to define Substitution Variables for a file location definition using a properties file. In this release, the system has been enhanced to automatically include the variable SPLOUTPUT. This is a system variable commonly defined with a valid file path that implementations may write files to. Automatically providing the configuration for this variable provides backward compatibility for any code that supported referencing "@SPLOUTPUT@" for a file location.

Security Related Enhancements

Application Service Portal shows Secured Objects

In this release a new zone has been added to the **Application Service** page on the **Application Security** tab. The **Secured Objects** zone shows the object or objects that the application service is related to. This information is provided to help a security administrator understand what the application service is for in order to determine the appropriate user groups to grant access to.

Application Service Added to Service Program

In previous releases, security for accessing menu entries that are based on navigation options and security for maintenance objects have been configured by defining an application service with a code that matches the code of the related Service Program for the menu entry or MO. The service program for the MO is a foreign key on the MO record. For the menu entries the connection is via the navigation option. The navigation options' navigation key refers to a program component, which is linked to a service program.

In this release, Application Service has been added to Service Program in order to provide an explicit foreign key rather than using the naming convention.

In addition, the added benefit is that all services are secured. Even services that are mainly internal are now associated with an application service so that anyone trying to execute a service from an external call must be a valid user in the system and must have access to the service program's application service. Also note that not all services in the system are defined in the Service Program metadata. These services are also secured using the F1-DFLTS application service, ensuring that only valid users in the system configured with access to this application service may execute the service from an external call.

Upgrade Note: All service programs are upgraded to have an application service. If an application service is found that matches the service program name, this application service is used. For any other service program, the F1-DFLTS application service is used. Implementations may override the application service to something more specific, if desired.

Miscellaneous Enhancements

Change to Base ILM Eligibility Algorithm

In previous releases, the base ILM Eligibility algorithm provided with the framework (F1-ILMELIG) did not make any updates to records that were determined to be ineligible for archival. In this release, a new parameter has been added to indicate whether or not the ILM Date should be updated to the current date for records that are determined to be ineligible for archival. Note that the base algorithm (also F1-ILMELIG) has been updated to set this parameter to "Y" as this is the suggested / preferred behavior going forward.

If an implementation uses this base algorithm but does not wish to adopt the new behavior, a new effective-dated parameter instance can be added for this algorithm, with a more recent date setting the value of the parameter to "N". Alternatively, a new algorithm can be created for the base algorithm type with the parameter set to "N" and plugged into the appropriate maintenance objects using a higher sequence number.

Initial Time Zone Delivered

In a previous release, Time Zone became a required field on the Installation Options record. However, at that time an intial value was not supplied when creating a new environment. Starting in this release, when creating an "initial installation" environment, a time zone of "UTC" is

supplied and linked to the Installation Options record. Once an implementation creates the appropriate time zone record for their specific jurisdiction, the installation options record may be updated with the appropriate value.

Note that environments created by upgrading from a previous release of the product are not impacted by this change.

Generic Owned Attachments Zone

In previous releases, to include an Attachments zone on a portal for adding and viewing attachments related to the displayed record, a special BPA and Zone needed to be built in order to properly populate the maintenance object and primary key of the record.

With recent support added to automatically populate context fields for MO and PK, the system is now able to supply a generic Attachment zone (F1-ATTCHOWN) that may be linked to a portal. With this zone users may add attachments to a record they are viewing as well as view existing attachments for the record.

Capture Attachment Extension

In previous releases, when uploading an attachment, the extension of the attachment was not retained. Rather the extension defined on the BO using a BO option was used. If an attachment BO had multiple extensions, the first extension in the list was used. For example, when uploading a Microsoft Word document, the Word BO (F1-WordDocument) includes BO options for the "doc" and "docx" file extensions In this case, the "doc" extension is the first in the list. If a user uploaded an attachment with an extension of "docx", when subsequently viewing that attachment, it would be downloaded with a "doc" extension.

In this release, the system has been enhanced to capture the extension of the attachment as part of the attachment name. That way, when subsequently viewing the attachment, the captured extension will be used.

Note that the attachment name of existing attachments are not updated. When launching existing attachments, the previous logic that uses the BO option to determine the extension will apply.

Migration Object Shows Primary Keys

When importing a migration data set, the 'compare' step generates the SQL to execute for each row related to a migration object to be used in the 'apply' step.   In this release, the system has been enhanced to capture and display the primary key of each SQL row.

Note that this enhancement has also been implemented in the 4.3.0.3.0 code line (via a hot fix bug 23326349) and in the 4.3.0.4.0 code line (via a hot fix bug 26288191).

Support Plug-in Driven Batch for Uploading Data

In this release, a new plug-in driven background process has been supplied to support uploading data from a file. The following points highlight more information about the functionality:

- The batch process supports parameters for defining the file path and the file name. In addition, the file name parameter may be configured to indicate that multiple files should be uploaded based on a "glob" syntax for wildcard characters.

- The batch process includes logic to rename the processed file to ensure that it is not processed again. This process does not include support for moving or deleting processed files.

- The batch process is responsible for opening each file and for each file, an algorithm supplied for a new **Batch Control - File Upload** plug-in spot is invoked. The File Upload algorithm is responsible for using provided APIs to read the content of the file and store the data in appropriate table(s) (for example, an appropriate staging table).

- A base batch control F1-PDUPL - Plug-in Driven File Upload Template is provided. This batch control refers to the new program and defines the parameters supported by the background process. Implementations should duplicate this batch control to initiate the configuration of a new file upload process.

- Additional custom parameters may be defined for a batch control that uses this batch process. The custom parameters are made available to the File Upload plug-in spot.

- The base product supplies three sample plug-in scripts to illustrate the APIs for different types of source files: comma delimited, fixed position and XML. In each case, the sample data used represents degree day data; and in each case, the data is mapped to a sample business object based on the Fact maintenance object. Only the plug-in scripts and the sample business objects are provided in base. No algorithms, algorithm types or batch controls are provided. In addition, no files are supplied. The file format is only described for illustration purposes. Note that the samples are provided only to illustrate the APIs. The other logic in the samples are simplified and are not intended to act as an example of how to design the upload process overall.

Enhance How Related To Do Entries are Determined

In previous releases, To Do entries were considered related when they shared a characteristic value where the characteristic type was a foreign key. This caused problems for implementations that wanted to capture administrative data for a To Do entry such as a division or a bill cycle or a device type. The related To Do determination considered all To Do Entries with the same administrative value as related. As such, implementations have been discouraged from linking administrative data to To Do entries as foreign key characteristics.

In this release, the functionality has been modified to only consider master and transaction type foreign keys when determining related To Do entries. This enhancement allows implementations to proactively link administrative data to To Do entries using foreign key characteristic types.

Note that this enhancement was also implemented as a hot fix to the 4.2.0.3.0 code line (via Bug 25353053) as well as previous service packs in the 4.3.x code line.

Oracle Utilities Application Framework System Data Details

This section provides information about new and updated system data delivered in this release that may need to be reviewed for possible impact by implementations.

New/Updated Application Services

The following application services were added or updated. Review and determine which user groups, if any, should be granted access to the application service/access mode.

The following application services are used by the Mobile Framework..

Application Service	Description	Access Mode
F1-BMCOM	Build Mobile Component Package	F1EX
F1-DEPLOYMENT	Deployment MO	A, C, D, R
F1-DEPLOYMENTPART	Deployment Part MO	A, C, D, R
F1-DEPLOYMENTTYPE	Deployment Type MO	A, C, D, R
F1DEPTYP	Deployment Type Portal	R
F1DPL	Deployment Portal	R
F1-DPLOY	Create Deployment	F1EX
F1DPLPRT	Deployment Part Portal	R
F1DPLQRY	Deployment Query Portal	R
F1-DPUTD	Deployment Evaluation and Purge	F1EX
F1-MDT	Mobile Data Terminal MO	A, C, D, R
F1MDTMNT	Mobile Data Terminal Portal	R
F1MDTQRY	Mobile Data Terminal Query Portal	R
F1MDTTYP	Mobile Data Terminal Type Portal	R
F1-MDTTYPE	Mobile Data Terminal Type MO	A, C, D, R
F1MOBCMP	Mobile Component Portal	R
F1-MOBCOMPBOAS	Mobile Component BO	A, C, D, R
F1MOBCPQ	Mobile Component Query Portal	R
F1-MOBILECOMPONENT	Mobile Component MO	A, C, D, R
F1-MSGFROMDEVBOAS	Message From Device BO	A, C, CA, D, F1PR, F1RR, PE, R
F1-MSGTODEVBOAS	Message To Device BO	A, C, CA, D, F1PR, R
F1-REMOTEMESSAGE	Remote Message MO	A, C, D, R
F1-REMOTEMSGSYNCDATA	Remote Message Synchronize Data	C, F1EX
F1REMSG	Mobile Remote Message Portal	R
F1REMSGQ	Mobile Remote Message Query Portal	R
F1-RMCRL	ILM Crawler - Remote Message	F1EX
F1-RMMSG	Remote Message Monitor	F1EX

The following application services are used with the new Outbound Message Type portal.

Application Service	Description	Access Mode

F1OUMSTQ	Outbound Message Type Query Portal	R
F1OUMSTY	Outbound Message Type Portal	R

The following application service is used by the Plug-in Driven Batch Template.

Application Service	Description	Access Mode
F1-PDB	Plug-in Driven Batch Template	F1EX

The following application services are used by the Web Service Category feature.

Application Service	Description	Access Mode
F1WBCAT	Web Service Category Portal	R
F1WBCATQ	Web Service Category Query Portal	R
F1-WEBSVCCAT	Web Service Category MO	A, C, D, R

New/Updated Migration Plans

The following migration plans have been added for new tables in the system:

- F1-DeploymentPart - Deployment Part
- F1-DeploymentType - Deployment Type
- F1-MDTType - MDT Type
- F1-MobileComponent - Mobile Component
- F1-WebServiceCategory - Web Service Category

New/Updated Migration Requests

A new migration request has been provided for the Mobile Framework related objects: *F1-Mobile*. This Migration Request has been added to the *F1-FrameworkConfig* group migration request.

The *F1-IntegrationConfig* migration request has been updated to include the *F1-WebServiceCategory* migration plan.

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 v4.3.0.6, or is planned for removal.

Deprecated Functionality

This section lists the functionality has been deprecated at the time of this release.

YUI Library Support

Due to the discontinued support of the open-sourced Yahoo! User Interface Library (YUI), all YUI components has been removed from the product. The recommendation for implementations is to review custom use of YUI library resources and replace the resources accordingly.

Proxy Settings for HTTP Senders

In previous releases, the system supported defining configuration for connecting to a remote system via an HTTP proxy on the Message Senders directly, using sender context. In this release, that support has been removed. Instead, to connect to a remote system via a Proxy, configure the connection information using the JVM settings.

Note that any Sender that is currently configuring HTTP proxy information will be updated to remove this configuration as it is no longer supported.

Items Planned for Future Deprecation

The following items will be not be supported in a future release.

Remove Customization Setting for Extended Data Area

The Extended Data Area field on the Data Area table is incorrectly defined as customizable (or "CMable"). This is not correct and will be fixed in a future release. If your implementation has populated the Extended Data Area column on any base owned data area, that information will be overwritten when this field is corrected. Note that the same functionality can be achieved by simply including the base owned data area in the custom data area's schema.

Remove Ability to Add Child Rows for Several Maintenance Objects

There are several maintenance objects where base delivered entries are supplied by the product. In some use cases, implementations can extend the base functionality by adding child rows to the base delivered configuration. For example, implementations may add algorithms to a base delivered business object. However, there are some use cases where implementations are not able to extend base functionality by adding child rows. For example, implementations are not able to add additional algorithm type parameters to a base delivered algorithm type. For most instances of such a restriction, there is validation preventing this in the user interface. However, there are several use cases where the validation is missing and will be added in a future release. Please make a note of it in case your implementation has added child rows in any of these maintenance objects. In the future, child rows that are not owned by the product will be removed.

- Algorithm Type - Parameters

- Application Service - Access Mode

- Maintenance Object - Table.

- Navigation Option - Context Fields.

- Script - Step Prompt

- Table - Field

- Table - Constraint / Field

- To Do Type - Sort Keys

- To Do Type - Drill Keys

- Zone Type - Parameters

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.

- Business Object F1-EnvironmentRefPhysicalBO

- Maintenance Object ENV REF

- 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 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 database table F1_IWS_SVC_OPER_L will be removed in a future release.

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

Support for HTTP Proxy Functionality

HTTP Proxies are a common technique for fire-walling outbound communications within and outside an enterprise.

In past releases, the configuration of a HTTP Proxy was done on individual senders and other connections. This increased the amount of duplication across the implementations with multiple places to update proxy settings.

In this release, these settings have been delegated to the JVM level using proxy features at the JVM level rather than individual connections. This will reduce the amount of configuration and maintenance of proxy functionality by allowing implementations to use the inbuilt proxy support from Java directly. This will require additional command line settings to be configured on the online WebLogic Servers and command lines within our configuration for batch.

For more information about the settings, refer to the Java Networking and Proxy documentation.

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. Please review any existing algorithms and create appropriate Pre-Compare algorithms instead.

BO Read in F1-MainProc when Pre-Processing Exists

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

In a subsequent release, to solve a UI Hints issue related to child BOs, a BO 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 BO Read is no longer necessary in F1-MainProc. Because there are many pre-processing scripts that

are properly performing the Read of the BO, ideally the BO 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 BO Read was included in F1-MainProc that were coded to not perform a BO read in the pre-processing script. Because of this situation, the BO Read is still performed as part of the processing of F1-MainProc.

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

Oracle Utilities Application Framework v4.3.0.6 Release Notes

This section describes enhancements, system data details and deprecation notices in Oracle Utilities Application Framework v4.3.0.6.0 including:

- System Wide Enhancements
- File Access Enhancements
- Batch Enhancements
- DBMS Scheduler Integration Enhancements
- To Do Enhancements
- Configuration Tools Enhancements
- Analytics Configuration Enhancements
- Web Service Enhancements
- Configuration Migration Assistant Enhancements
- Mobile Framework Enhancements
- Security Enhancements
- Miscellaneous Enhancements
- Oracle Utilities Application Framework System Data Details
- Oracle Utilities Application Framework Deprecation Notices

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

System Wide Enhancements

Change to the About Box for Cloud Implementation

In the About Box, you can see simplified product information for Cloud implementations. The About Box shows the Cloud product name and the Cloud version. It does not display all the products in the "stack". This information is still visible in the **Installation Options - Installed Products** page.

Steps To Enable

No steps are required to enable this feature.

Required Indicator Added to Fixed Pages

You will see asterisks next to fields that are required as defined in the table / field metadata. Business objects are not considered for these types of pages. In the previous release, portal-based pages were enhance to automatically display an asterisk adjacent to fields that are required as defined in either the table / field metadata or in the business object schema.

Steps To Enable

No steps are required to enable this feature.

File Access Enhancements

The following sections highlight enhancements related to accessing files.

Support for Defining File Alias Using Extendable Lookup

In a previous release, we provided the ability for you to define substitution variables for a file location definition using a properties file. This allowed you to configure file locations in the application in places like Batch Control "File Path" parameters and in various master configuration options to reference a "token" rather than the full file path. For this release, an alternate option has been provided that allows you to defined native file storage locations using an extendable lookup.

Note: Any code that references file paths for reading or writing must be updated to reference a new API in order to support this functionality. Contact customer support for more information.

Steps To Enable

The **F1-FileStorage** (File Storage Configuration) extendable lookup has been provided to support this feature. Using this extendable lookup, you can define a value referencing the "Native File Storage" file adapter option, and then define the file path that this value represents. The file path field follows the same rules as any other file path. For example, it can reference "@SPLOUTPUT@" or any other value defined in the Substitution Variables properties file. In addition, if the system has been configured to validate the value against a whitelist, this is also enforced.

A new syntax has been defined for referencing file locations during configuration. For example, in "File Path" parameters for a batch control: file-storage://{ExtendableLookupValue}.

Key Resources

Refer to the online help for more information about the supported syntax.

Support for Cloud Storage Access

For Cloud product releases, the system allows you to create code that reads or writes files to reference an Oracle Cloud Storage location rather than the native file system.

Steps To Enable

The **F1-FileStorage** (File Storage Configuration) extendable lookup has been provided to support this. Using this extendable lookup, a value may be defined referencing the "Oracle Cloud Object Storage" file adapter option, which allows for the details on how to connect to cloud storage to be entered.

Using this configuration, the same syntax described above may then be used when defining a File Path in the application (for example, a parameter for a batch control).

file-storage://{ExtendableLookupValue}/{bucket name}

Note: Any code that references file paths for reading or writing must be updated to reference a new API in order to support this functionality. This is the same API mentioned above for supporting defining a Native File Storage location using the F1-FileStorage extendable lookup. Contact customer support for more information.

Key Resources

Refer to the online help for more information about the supported syntax.

Batch Enhancements

Enhanced Bind Variable Support for Plug-In Drive Batch

The Plug-in Driven Batch functionality in the system supports product-specified bind variables for known batch related attributes like batch business date and batch run number. In previous releases, the mnemonic you used to specify the bind variables used a prefix of "f1.". This causes an issue in certain system configurations. In this release, the system has been enhanced to support the

prefix "f1_". This is the recommended prefix you should use going forward. The prefix "f1." continues to be supported for backward compatibility.

Steps To Enable

No steps are required to enable this feature.

Key Resources

Refer to the online help for plug-in driven batch programs for more information.

Monitor Batch Programs Support Restricting By Date

The monitor batch program now supports a **Restrict by Date** parameter. If you populate this parameter with the name of a date field on the primary table of the maintenance object, this limits the records selected to those whose data value is on or before the current date. This allows you to use business objects that have a business rule where a given state transition should only occur many weeks, months or even years in the future. If the record supports a date to mark the future event, the business object can be configured to monitor only the records whose date has arrived. This ensures that, when the monitor is run, it is not constantly picking up records that are not ready (just to check the date and move on).

Optionally, the parameter may include + / - a number of days to support. For example: "all records whose DATE is on or before 3 days from now" or "all records whose DATE is on or before yesterday".

Steps To Enable

Edit the batch control for the monitor process that you wish to restrict using dates and add the restrictToDate parameter using the syntax described above.

Add Start and End Date / Time to Batch Run

In previous releases, the system did not capture the start and end date and time for a batch run. The start and end of each thread was captured through messages linked to the thread.

Since many use cases are requiring information about the start and end of the whole batch run, you can see that the **Start Date / Time** and **End Date / Time** have been added to the batch run table. The system now stamps this information onto newly created batch runs.

Steps To Enable

No steps are required to enable this feature.

Tips and Considerations

Backward compatibility: Note that due to the sheer volume of batch runs that would exist for upgrading clients, an upgrade script to populate the new start date / time and end date / time has not been provided. Instead, the system includes a business service and java methods to retrieve the start / end date / time for a batch run. This code will first check the columns on the batch run and use those, if populated. Otherwise, it will derive the information using earliest thread's start date / time and the latest thread's end date / time. Note that the business service provided is F1-GetBatchRunStartEnd.

Enhanced Level of Service Support

The "Level of Service" plug-in spot used with batch controls has been enhanced to support multiple algorithms. As a result, you will see that various user interfaces and services that support retrieving level of service information have been enhanced accordingly. In all cases, if the batch control has a single algorithm, the existing behavior continues where the results from that

algorithm are returned. If multiple algorithms are found, an overall response is set based on the detailed responses from each algorithm. In addition, the detailed responses are available.

The overall response is set to Error if any of the algorithms returned an error. Otherwise, it is set to Warning if any of the algorithms returned a warning. Otherwise, it is set to Normal.

The following functionality has been enhanced as follows:

- The Health Check business service (F1-HealthCheck). The BS schema still includes a single overall response. In addition, a new collection of detailed responses are included.

- The **Health Check** portal has been enhanced to show the overall response when multiple algorithms exist along with the message, "See results for details". An icon is also provided to expand the section to see the details.

- The **Batch Control** main page has been enhanced to show the overall response for Level of Service when multiple algorithms exist along with the message, "See results for details". An icon is also provided to expand the section to see the details.

Steps To Enable

No steps are required to enable this feature.

DBMS Scheduler Integration Enhancements

This section provides information about enhancements to various APIs provided to integrate with the DBMS Scheduler.

Job Details Service Includes Error Details

The **F1-DBMSGetJobDetails** (DBMS Scheduler Job Details) business service returns an additional element in the Steps collection: error details. If the step's status is Error, you will be able to review the information about the error.

Steps To Enable

No steps are required to enable this feature.

Separate Business Services Provided for Adding / Changing Entries

In a previous release, "maintenance" business services were provided to support maintaining the various objects in the DBMS data model: Program, Chain, and Schedule. In this release, you can use additional business services for maintaining Program, Chain and Schedule when the required elements have been configured appropriately. The new business services are recommended for use when adding or changing a given object. The existing business services are still appropriate when reading or deleting an object.

Steps To Enable

No steps are required to enable this feature.

Support a Job Scope for Defining Options

In previous releases, the DBMS integration supported setting options globally or setting options for a specific program (batch code). In this release, you can now set options for a Job. The option applies to all the programs in the chain for that job.

This gives you the ability to set a **Batch Business Date** for all programs in the chain for a given job.

Steps To Enable

No steps are required to enable this feature.

Additional Configuration Options for Job List Service

The **F1-DBMSGetJobs** (DBMS Scheduler Job List) business service returns information about running or completed runs (based on an input parameter) for a job stream. In previous releases, when requesting completed jobs, the service returned the most recent completed run for each distinct job stream for the input date range.

In this release, you can use additional input parameters to tailor the information returned about running or completed jobs.

- **Return Type** indicator. This is only applicable for completed runs. Using this indicator you can specify if the most recent run of each job stream should be returned or if all completed jobs should be returned for the date range.

- **Job Name**. If a job name is supplied only the details for that Job Name are returned. This is applicable for both running or completed jobs and works in conjunction with the new **Return Type** indicator.

Steps To Enable

No steps are required to enable this feature.

To Do Enhancements

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

Recalculate To Do Priority

The system supports an algorithm to calculate a To Do Entry's priority by considering specific factors related to an entry. The Calculate Priority algorithms are executed when the To Do entry is created and updated.

To Do priority calculation logic has been enhanced as follows:

- A new batch control is provided to execute the Calculate Priority algorithms for non-closed To Do Entries (F1-TDCLP). This allows you to implement priority algorithms that use factors that may change over time.

- A log entry is created when the To Do Entry has been updated as a result of a Calculate Priority algorithm. It uses a new log entry type: "Calculated Priority". This is distinct from the log entry type that indicates you have overridden the priority.

Steps To Enable

No steps are required to enable this feature.

Monitor a To Do Entry

A new "To Do Monitor" system event has been added to To Do Type. You can use To Do Monitor algorithms to periodically review information related to a To Do entry and take action, if appropriate. For example, To Do Monitor algorithms may be used to detect if the situation that caused the To Do Entry to be generated has been remedied in the meantime, allowing for the To

Do Entry to be completed. Along with the new plug-in spot, a batch process has also been provided (F1-TDMON) that selects non-final To Do entries whose To Do type is configured with at least one monitor algorithm and executes the monitor algorithms.

A new base algorithm type has also been provided to close a To Do entry if more than X days have passed since its creation (where X is a configurable parameter). You can use this algorithm for To Do Types that create entries that may become obsolete if some number of days have passed with no action.

Steps To Enable

No steps are required to enable this feature.

Expand Ability to Add Logs and Enter Comments on To Do

Previously, the ability to update To Do Entries is limited to users that are either assigned to the To Do Entry (for "being worked on" records) or are in a role for a record in "open" status.

The validation has been relaxed to allow other users to add comments or to add a User Log entry for any To Do Entry that is in Open or Being Worked On status. For example, if a call center user is speaking to a customer about an issue and the user finds a To Do that is related to the issue, the call center user can add information to the To Do Entry from the conversation with the customer even if the user is not authorized to work on the To Do.

Steps To Enable

No steps are required to enable this feature.

Configuration Tools Enhancements

The following sections highlight enhancements to the configuration tools functionality.

New Schema Editor

You can use the new schema editor on schema-based objects (Business Objects, Business Services, Service Scripts / BPA Scripts, UI Maps, and Data Areas).

Some of the features are highlighted below:

- The default view of the schema editor is a **Tree** view of the elements on the leftmost column and a tabular view of some of the most common attributes of each element.

- You can toggle to a **Label** view, which shows field labels or referenced objects' descriptions. For example, for any included business objects, data areas, UI maps, etc., toggling to the **Label** view shows the description of these objects.

- The edit button shows a more detailed panel to configure all the attributes of the element. This is the same panel used in previous releases.

- The user can toggle to the **Text** view. This view has been enhanced to use colors to distinguish element names from attribute labels from attribute values.

Note that this was also added to 4.3.0.5.0 as a hot fix. (Bug 27077859)

Steps To Enable

No steps are required to enable this feature.

Process Flow Configuration Tool

You can now use a new Process Flow Configuration tool. A process flow is an interface guiding a user through a series of actions in order to accomplish a specific task. The task can be as simple as the collection of information in order to update business data or involve more complex logic such as submitting and tracking batch processes, exchanging messages with an external system, etc. You can easily implement these user interfaces using the Process Flow Configuration tool. A process flow type defines the entire metadata needed to control the behavior of process flows of a given type. This includes the sequence of steps, the panel, the rules associated with each step, and more.

Steps To Enable

1. Create the components, such as UI maps and scripts, to be used for displaying and managing each step in the process.

2. Configure a Process Flow type for that process.

3. Set up the appropriate navigation method for process flows of that type.

Key Resources

Refer to online help for detailed information on how to design and configure a process flow.

Terminology Change in Add Element Dialog

You will see new terminology when adding an element in the scheme editor. In the previous release, the option for including a Map in the schema via UI Hints was called **Embedded HTML** in the **Add** dialogue. When viewing the configuration details, the section heading was **Embedded HTML Attributes**. However, the schema element generated (and visible in the **Tree** view of the schema editor) is uiHint:includeMap. In this release, the text in the **Add** dialogue has been changed to **Include Map Fragment**. When viewing the configuration details, the section heading is now **Included Map Fragment Attributes**.

Steps To Enable

No steps are required to enable this feature.

Optional Display of State Transition UI Map

There may be circumstances in which the status pre-processing logic can determine the value of the elements to be captured in the state transition map, and you may not find it necessary for the map to be invoked. A new data area (F1-StateTransitionCommon) has been provided that can be included in your pre-processing script. The data area contains a Boolean element called skipStateTransitionMap that you can set in your script logic. If this element is set to "true", F1-MainProc will bypass the state transition map processing step.

Steps To Enable

No steps are required to enable this feature.

Analytics Configuration Enhancements

This section provides information about enhancements to analytics configuration functionality.

Cube Views

You can now perform data analysis using Cube Views. Data cubes are multi-dimensional representations of data sets that can be "sliced" using various filters.

The Cube View enhancement includes the following features:

- A new Cube Type maintenance object to capture the configuration of a cube view, including a data explorer zone and corresponding business service that retrieve the data set for a specific cube view type.

- A new Cube View maintenance object and business object that captures various attributes of a cube view instance.

- A generic UI map and supporting service script for displaying a cube view.

- A portal for viewing and maintaining cube view instances.

Steps To Enable

If your product provides business services that support pre-defined Cube Views you wish to use for analysis, you will need to define Cube Types for those views. If you wish to design new Cube Views, you will need to create a supporting business service and zone that follow specific technical guidelines in addition to the corresponding Cube Types.

Key Resources

Refer to the online help for Cube Views for more information.

Web Service Enhancements

The following sections highlight changes to the web service functionality.

Support Configuration for REST Web Services

You can configure REST web services by leveraging the existing inbound web service metadata. A new **Web Service Class** field, with values of REST and SOAP, has been added to inbound web services. The existing inbound web service functionality is now referred to as inbound SOAP web services, or SOAP IWS. Inbound web service deployment is specific to SOAP functionality.

The following points highlight some of the features:

- In this release, only the POST HTTP method is supported.

- Inbound REST web services reference a resource category. The categories are defined using an extendable lookup. The resource category is a type of grouping attribute. This allows an implementation to associate multiple inbound web service records with a common resource.

- A REST inbound web service may define one or more operations. Each operation defines the business object, business service, or service script that is invoked when the REST service is invoked. For each operation, you configure a Resource URI, which along with the inbound web service name is used to compose the URL for the REST service.

- REST inbound web service records, like SOAP inbound web service records, may be associated with a Web Service Category, which is used to describe the functionality that uses the web service.

- The product uses OpenAPI Specification (formerly Swagger Specification) for viewing the REST API.

- A new REST servlet is provided that supports a new URI format that includes the inbound web service name and resource URI.

The web service catalog functionality used for the integration with Oracle Integration Cloud supports a REST catalog in addition to the existing SOAP catalog.

Steps To Enable

No steps are required to enable this feature.

Key Resources

Backward Compatibility: In previous releases, the product supported a REST servlet that allowed for a business service or service script to be referenced in the URI. This servlet is still supported; however, it now does a check that the business service or service script is referenced in operation for an inbound web service record. This provides an extra layer of security, allowing the product to limit the business service or service script records that are exposed via REST. For backward compatibility, the product provides inbound web service records out of the box for each business service and service script that is part of an existing integration that uses the existing REST servlet. New integrations should use the new REST servlet functionality specified using inbound web service metadata.

Explicitly Define Owner in Service Catalog Configuration

The integration with the Oracle Integration Cloud includes an owner flag for each web service using the owner flag of the main installed product. By using this functionality in the catalog, you can distinguish, for example, web services from Oracle Utilities Customer Care and Billing from web services from Oracle Utilities Work and Asset Management. You can now explicitly choose the owner value to include in the catalog for the web services for your installation using the Owner attribute added to the Service Catalog master configuration. Previously, the owner flag was taken from the **Installed Products** collection using the product marked to "display". When there were implementations where multiple installed products were marked for "display", the integration would potentially choose one that may not be appropriate for that web service integration.

Steps To Enable

If the "display" product in **Installed Products** is not the correct product to include, edit the Service Catalog master configuration record and select the appropriate owner flag.

Improve Performance for Outbound Messages

In previous releases, implementations were required to use the Outbound Message Dispatcher business services to send an outbound message without instantiating it (but where the outbound message business object pre-processing algorithms need to be executed). This business service orchestrated a creation and deletion of the outbound message, which is not desired for performance reasons.

The alternate Outbound Message Mediator business service routes a message without instantiating anything. This business service is preferred when the outbound message should not be instantiated. However, this did not execute the business object pre-processing algorithms. In this release, the Mediator business service has been enhanced to also execute the business object pre-processing algorithms.

Steps To Enable

No steps are required to enable this feature.

Configuration Migration Assistant Enhancements

This section provides information about enhancements to configuration migration assistant (CMA) functionality.

Algorithm to Purge Unchanged Transactions

If desired, you can use a new business object exit algorithm to purge "unchanged" migration objects for a migration data set. This algorithm is meant to be used on the Migration Data Set Import BO (F1-MigrDataSetImport). The algorithm is not plugged in by default.

Steps To Enable

Edit the lifecycle of the F1-MigrDataSetImport business object and configure F1-MGDPURGE as an Exit algorithm for the Ready to Compare status.

Mobile Framework Enhancements

This section provides information about enhancements to mobile framework functionality.

> **Note**: The mobile framework is used only with Oracle Utilities Work and Asset Management.

Support to Activate Deployment Upon Creation

You can use a new to parameter in the Create Deployment background process (F1-DPLOY) that indicates if the deployment should be activated after creation. By setting this parameter to "Y", you can save the extra step of manually activating the deployment after the background process finishes.

Steps To Enable

When submitting the batch job, set the new parameter to "Y".

Restrict Mobile Image Attachment File Size

You can configure different attachment size limits for different types of mobile devices. If such a limit is not specified for the mobile device type, the mobile application does not restrict the size of images captured in the field.

Steps To Enable

Edit your MDT type records to set a maximum attachment storage size (defined in MB).

Security Enhancements

This section provides information about enhancements to application security functionality.

Introduce Cryptography Key Support

You can use cryptograph keys for cloud implementations. Signature keys are required for connecting to cloud object storage. The system provides an object called key ring, which allows for a key pair to be generated. To support key rotation, new key pairs can be generated over time. When configuring the Cloud object storage details, you configure the key ring to use for the signature.

Steps To Enable

Define Key Ring codes and generate keys to be used for cloud strorage.

Key Resources

Refer to **Support for Cloud Storage Access** on page 1-26 for more information.

Introduction of Object Erasure

You can use an enhanced framework to manage erasure of personally identifiable information (PII). A person's right to erasure of their information is an important data privacy issue.

This release of the object erasure functionality supports the following:

- The ability to mark a maintenance object as eligible for erasure and define the retention period for the data.

- A new Object Erasure Schedule maintenance object to capture the key fields and erasure date for records whose PII must be removed.

- Support for creating and monitoring the erasure schedule, including the method to be used for erasure.

- A portal for viewing erasure configuration and a context-sensitive zone to view erasure status for an object.

- Support for erasing an object by purging its records and for erasing user PII through obfuscation.

Steps To Enable

1. Identify the maintenance objects that have personally identifiable information that you need to erase or obfuscate.

2. Configure each maintenance object with appropriate values for the Erasure BO and Erasure Period options.

3. Configure the appropriate Manage Erasure Schedule algorithms on each of the maintenance objects.

Key Resources

Refer to the online help for data privacy and object erasure for more information.

Miscellaneous Enhancements

Country Enhancements

You can use new drop-down values of Optional and Not Allowed when indicating that a particular address component is enabled instead of using the Boolean checkboxes that used to be used. This allows edge products to introduce additional values, if desired. For example, if an edge product wants to support marking an address component as Required, that value can be added to the list of valid values.

Steps To Enable

No steps are required to enable this feature.

Tips and Considerations

Backward compatibility: The Boolean values are still maintained so that any code relying on those values will still work as before. The user interface has been updated to display the dropdown instead of the checkbox.

Attachment Enhancements

You can reference two new columns in the Attachment table:

- **External Reference ID**: This value is available when attachments are added from another system with IDs. The system supports capturing this value in the record and it is displayed in the user interface when populated.

- **Comments**: You can add additional information when creating an attachment.

The system has also introduced a setting to limit the size of the attachment. A new option, **Maximum Attachment Size**, has been added to the General System Configuration feature type. You can define a value here to issue an error if an attachment greater than this size is uploaded.

Steps To Enable

No steps are required to enable this feature.

Customization Setting for Extended Data Area Removed

The **Extended Data Area** field on the Data Area table was incorrectly defined as customizable (or "CMable"). This was incorrect and has been fixed in this release. If your implementation has populated the **Extended Data Area** column on any base-owned data area, that information will be overwritten when this field is corrected.

Note: You can achieve the same functionality by simply including the base-owned data area in the custom data area's schema.

Steps To Enable

No steps are required to enable this feature.

F1-RetrieveCharValDescription Business Service Updated

The Retrieve Characteristic Value Description business service has been updated to use logic that does an exact match on the input characteristic type and characteristic value. In previous releases, the business service to Retrieve Characteristic Value Description was "wrapping" the online characteristic value search. This supported a "likeable" search on the characteristic value. This is not correct behavior for a business service, which is usually used by code that expects one and only one result.

Steps To Enable

No steps are required to enable this feature.

Master Configuration List Usability Enhancements

Master configuration list now provide the following enhancements:

- You are only shown the master configuration business objects for which you have appropriate security rights.

- A filter by Description has been added to support the ability to limit the rows based on the input value. The filter area is collapsed by default.

Steps To Enable

No steps are required to enable this feature.

New ILM Algorithms - Proactively Update ILM Switch

The ILM Eligibility algorithm on a maintenance object, invoked by the ILM crawler batch control, has the responsibility of reviewing records whose **ILM Date** has arrived and marking the **ILM Archive** switch to "Y" based on specific criteria. A common criterion for marking the ILM Archive switch to "Y" is that the record is in a final status.

You can use two new business object level plug-ins:

- A business object Enter Status plug-in to set the **ILM Archive** switch to "Y". You can use this for records that are configured for ILM and have a business object with a lifecycle. You can plug this into the final state(s) to proactively set the switch to "Y". This will reduce the number of records to be reviewed by the ILM Eligibility algorithm when the crawler is run.

- A business object Exit Status plug-in to set the switch back to "N". This is provided for those final states where the record may transition back to a non-final state and where you have plugged in the above Enter status.

Steps To Enable

No steps are required to enable this feature.

Support Including Column Headers in Sync Request Extract

There is a a new "Add Column Header" parameter on the Sync Request Extract batch process (F1-SYNEF). If you indicate "Y" for the parameter value, a header record with the column names taken from the data area referenced in the snapshotDA element of the Sync record is included.

Note: This was also added to 4.3.0.5.0 as a hot fix. (Bug 27472229)

Steps To Enable

No steps are required to enable this feature.

Return All Errors on COBOL SQL Updates

All errors encountered during a COBOL update will be returned as an error. In previous releases, only the duplicate error was handled and returned a duplicate error. All other errors were ignored and returned OK.

Note: The hot fix was done in 4.3 SP1.

Steps To Enable

No steps are required to enable this feature.

Removal of Product-Specific Domain Templates

In past releases, Oracle Utilities Application Framework domain templates were shipped with each product to allow for a standard installation experience using the Oracle WebLogic Configuration Wizard. The use of the domain template with the wizard automates the creation of the WebLogic domain used to house the Oracle Utilities products. Due to the standardization efforts between Oracle Utilities Application Framework and the Oracle WebLogic team, you can now use the standard Oracle WebLogic domain templates supplied with Oracle WebLogic with Oracle Utilities Application Framework products. As a result, product-specific templates are no longer necessary and are no longer shipped with the products. You can use the standard templates with a few minor post installation steps.

This enhancement allows greater flexibility when creating the domain for the product in terms of the domain setup as well when in the installation process the domain creation can occur.

Steps To Enable

No steps are required to enable this feature.

Tips and Considerations

If necessary, you can continue to use the WebLogic Domain Builder as in previous releases (post installation to create custom domains).

Key Resources

Details of the new process are documented in the Installation Guide and a new whitepaper covering optimization of the Oracle WebLogic domain for Oracle WebLogic 12.2.x.

Oracle Utilities Application Framework System Data Details

This section provides information about new and updated system data delivered in this release that may need to be reviewed for possible impact by implementations.

New/Updated Application Services

The following application services were added or updated. Review and determine which user groups, if any, should be granted access to the application service/access mode.

The following application services are used with the cryptography key support feature..

Application Service	Description	Access Mode
F1-CRYPTOKEYRING	Key Ring MO	A, C, D, R
F1KEYRNG	Key Ring Portal	R

The following application services are used with the Cube View feature.

Application Service	Description	Access Mode
F1-CUBETYPE	Cube Type MO	A, C, D, R
F1-CUBEVIEW	Cube View MO	A, C, D, R
F1-CUBEVIEWBOAS	Cube View BO	A, C, D, F1AC, F1IN, R
F1CUVWM	Cube View Portal	R
F1CUVWQ	Cube View Query Portal	R
F1CVTYPE	Cube Type Portal	R

The following application service is used by the object erasure feature.

Application Service	Description	Access Mode
F1ESRCFG	Erasure Configuration Portal	R
F1OBERSC	Object Erasure Schedule Portal	R
F1-OBJERSRSCH	Object Erasure Schedule MO	A, C, D, R
F1-OBJERSRSCHBO	Object Erasure Schedule BO	A, C, D, F1DC, F1ED, PE, R

F1-OBJESRSCD	Object Erasure Schedule Zone	R
F1-OESCRL	ILM Crawler - Object Erasure Schedule	F1EX
F1-OESMN	Object Erasure Schedule Monitor	F1EX

The following application services are used with REST Web Services.

Application Service	Description	Access Mode
F1-GETWSDL	Retrieve Inbound SOAP Web Service WSDL BS	F1EX
F1-MOBILESWS	Mobile Web Services	F1EX

The following application services are used by the Process Flow feature.

Application Service	Description	Access Mode
F1PROC	Process Flow Type Portal	R
F1_PROC	Process Flow Portal	R
F1-PROCDEFN	Process Flow Type MO	A, C, D, R
F1-PROCSTORE	Process Flow MO	A, C, D, R
F1-PROCSTOREBOAS	Process Flow BO	A, C, D, R
F1PRSTRQ	Process Flow Query Portal	R

The following application services are used with To Dos.

Application Service	Description	Access Mode
F1-TDCLP	Recalculate To Do Priority	F1EX
F1-TDMON	To Do Monitor	F1EX

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 v4.3.0.6, or is planned for removal.

Deprecated Functionality

This section lists the functionality has been deprecated at the time of this release.

XML Application Integration (XAI) and Multi-Purpose Listener

The XML Application Integration (XAI) Servlet and Multi-Purpose Listener (MPL) have been removed. Customer migrating to this release should migrate to the recommended alternatives as recommended in the Oracle Service Bus Integration (Doc Id: 1558279.1) and Migrating from XAI to IWS (Doc Id: 1644914.1) whitepapers available from My Oracle Support.

As part of this effort, the user documentation has been updated to remove all the topics related to the XAI servlet and MPL.

Batch on WebLogic

Batch on Weblogic node is no longer supported. Note that this was an implementation that was possibly usable for GBUCS; however, the implementation is no longer viable used in the new OCI (Oracle Cloud Infrastructure/BMC).

Ability to Add Child Rows for Several Maintenance Objects

There are several maintenance objects where base delivered entries are supplied by the product. In some use cases, implementations can extend the base functionality by adding child rows to the base delivered configuration. For example, implementations may add algorithms to a base delivered business object. However, there are some use cases where implementations are not able to extend base functionality by adding child rows. For example, implementations are not able to add additional algorithm type parameters to a base delivered algorithm type. For several use cases, there was validation missing and has been added in this release. If your implementation has added child rows for the maintenance objects in this list, they will be removed at upgrade time:

- Algorithm Type - Parameters
- App Service - Access Mode
- Maintenance Object - Table.
- Navigation Option - Context Fields.
- Script - Step Prompt
- Table - Field
- Table - Constraint / Field
- To Do Type - Sort Keys
- To Do Type - Drill Keys
- Zone Type - Parameters

Items Planned for Future Deprecation

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

Miscellaneous System Data

- Environment Reference. This administrative MO 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 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 database table F1_IWS_SVC_OPER_L will be removed in a future release.

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

Support for HTTP Proxy Functionality

HTTP Proxies are a common technique for firewalling outbound communications within and outside an enterprise.

In past releases, the configuration of a HTTP Proxy was done on individual senders and other connections. This increased the amount of duplication across the implementations with multiple places to update proxy settings. In this release, these settings have been delegated to the JVM level using proxy features at the JVM level rather than individual connections. This will reduce the amount of configuration and maintenance of proxy functionality by allowing implementations to use the inbuilt proxy support from Java directly. This will require additional command line settings to be configured on the online WebLogic Servers and command lines within our configuration for batch.

For more information about the settings, refer to the Java Networking and Proxy documentation

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.