

# **Oracle Utilities Customer Care and Billing**

Release Notes

Release 2.7.0.0

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Oracle Utilities Customer Care and Billing Release Notes, Release 2.7.0.0

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# Preface

Welcome to the Oracle Utilities Customer Care and Billing Release Notes.

These release notes provide an overview of the new functionality, enhancements, known issues, and other important information in this release.

## Audience

This document is intended for anyone installing or using Oracle Utilities Customer Care and Billing.

## Related Documents

For more information, refer to these Oracle documents:

### **Installation Guides and Release Notes**

- *Oracle Utilities Customer Care and Billing V2.7.0.0 Release Notes*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Quick Install Guide*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Installation Guide*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Database Administrator's Guide*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Optional Products Installation Guide*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Licensing Information User Manual*

### **Administrative and Business User Guides**

- *Oracle Utilities Customer Care and Billing V2.7.0.0 Administrative User Guide*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Business User Guide*

### **Supplemental Documents**

- *Oracle Utilities Customer Care and Billing V2.7.0.0 Server Administration Guide*
- *Oracle Utilities Customer Care and Billing V2.7.0.0 Security Guide*

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## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	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.

## Acronyms

The following acronyms and terms are used in this document:

Acronym	Definition
CCB	Oracle Utilities Customer Care and Billing
OUAF	Oracle Utilities Application Framework

# Chapter 1

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## Release Notes

This document provides general information about Oracle Utilities Customer Care and Billing V2.7.0.0.0, including:

- [Release Overview](#)
- [Database Changes](#)
- [Enhancements in Oracle Utilities Customer Care and Billing](#)
- [System Data Details](#)
- [Known Issues in This Release](#)
- [Deprecation Notices](#)
- [Supported Integrations](#)
- [Demo Data Information](#)
- [Oracle Utilities Application Framework v4.3.0.6.0 Release Notes](#)

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

## Release Overview

This section provides an overview of this Oracle Utilities Customer Care and Billing release. The release includes the following components:

- Oracle Utilities Customer Care and Billing V2.7.0.0.0
- Oracle Utilities Application Framework V4.3.0.6.0

Please visit My Oracle Support (<http://support.oracle.com>) and Oracle Software Delivery Cloud (<http://edelivery.oracle.com/>) for the most recent service packs and patches for Oracle Utilities Customer Care and Billing V2.7.0.0.0 to ensure you have the most current version of this product.

## Supported Platforms

Refer to the **Supported Platforms** section in the *Oracle Utilities Customer Care and Billing Installation Guide* included in this release for an updated list of supported platforms.

## Supported Upgrades

This version of Oracle Utilities Customer Care and Billing supports the following “one-step” upgrade paths:

- From Oracle Utilities Customer Care and Billing V2.6.0.1.0 to V2.7.0.0.0
- From Oracle Utilities Customer Care and Billing V2.6.0.0.0 to V2.7.0.0.0
- From Oracle Utilities Customer Care and Billing V2.5.0.2.0 to V2.7.0.0.0
- From Oracle Utilities Customer Care and Billing V2.4.0.3.0 to V2.7.0.0.0
- From Oracle Utilities Customer Care and Billing V2.3.1.10 to V2.7.0.0.0

Refer to the *Oracle Utilities Customer Care and Billing Database Administrator's Guide* for further details on the above and also other upgrade paths from other versions of Oracle Utilities Customer Care and Billing.

## Database Changes

The database enhancements for version 2.7.0.0.0 are fully documented in *Oracle Utilities Customer Care and Billing Database Administrator's Guide*.

This section highlights some specific information to note related to database changes.

## Database Changes to Highlight from Previous Releases

The following table highlights database changes that were done prior to the V2.4.0.3.0 release but were not listed in that version's *Database Administrator's Guide*.

Table Name	Columns	Comment
CI_BANK_ACCOUNT	ENCR_ACCOUNT_NBR	New column introduced in CCB 2.4.0.1.0 as part of encryption functionality



Table Name	Columns	Comment
CI_ENRL_FLD	ENCR_COL_REF_VAL HASH_COL_REF_VAL	New columns introduced in CCB 2.4.0.1.0 as part of encryption functionality
CI_APAY_SRC_L	APAY_SRC_NAME	Column Format Change.
SC_USER	TIME_ZONE_CD USER_ENABLE_FLG F1_SECURITY_HASH	New columns introduced in FW 4.2.0

## Upgrades to Oracle Utilities Customer Care and Billing Database

The Oracle Utilities Customer Care and Billing upgrade process involves changes in the database (new tables, new columns, new indexes, column format changes etc). The changes to the database are documented in the *Oracle Utilities Customer Care and Billing Release Notes* and *Oracle Utilities Customer Care and Billing Database Administrator's Guide* for each release.

The table below lists previous releases of Oracle Utilities Customer Care and Billing along with their corresponding patch number in Oracle Software Delivery Cloud. Use the patch number to download documentation for an older release of Oracle Utilities Customer Care and Billing. This information is useful to customers who wish to understand the extent of database changes between different releases of the product.

Oracle Utilities Customer Care and Billing Version	Oracle Software Delivery Cloud Patch Number
2.3.1	20100078
2.4.0.1	16978448
2.4.0.2	17589574
2.4.0.3	19075773
2.5.0.1	19407590
2.5.0.2	23629545
2.6.0.0	25942322
2.6.0.1	27426326

# Enhancements in Oracle Utilities Customer Care and Billing

This section describes new and enhanced features in this release of Oracle Utilities Customer Care and Billing.

The release includes:

- [Data Privacy Enhancements](#)
- [Person Name Format Standardization](#)
- [Enhanced Case Management Validation Processing](#)
- [Enhanced Account Bill/Payment History Page](#)
- [Enhanced Account Financial History Page](#)
- [Enhanced SA \(Service Agreement\) Financial History Page](#)
- [Auto-Canceling Aged Pending and Held Orders](#)
- [Protecting Address Details on Adjustment A/P Requests](#)
- [Protecting Field Activity Type on Dispatched Field Activities](#)
- [Capturing Billable Charge Template on Billable Charges](#)
- [Supporting Additional Automated Clearing House \(ACH\) File Extract Source Values](#)
- [Enhanced Point of Sale \(POS\) Printer Integration Support](#)
- [Enhanced Third Party Payment Processing](#)
- [Enhanced Write Off Transfer Processing](#)
- [Merging Billing and Credit & Collections Batch Controls](#)
- [Specific Algorithm Types Converted to Groovy Scripting](#)
- [Batch Control for Renumbering Service Route Sequences](#)
- [Specific Batch Controls Enhanced to Reference File Storage Configuration Extendable Lookup](#)
- [Miscellaneous Updates](#)

## Data Privacy Enhancements

Personally Identifiable Information (PII) is any information that identifies or could be used in combination with other information to identify an individual. Many countries have data privacy laws governing the use of such information. A key aspect of these laws is an organization's obligation to erase personal information when there is no compelling reason to retain it. This obligation can be fulfilled either by deleting the data or altering the data in such a way that it is no longer possible to associate the data with an individual.

**Object Erasure** is designed to support right to erasure requirements, with a combination of configuration and processes that may be extended to implement the appropriate policies for PII data within Oracle Utilities Customer Care and Billing.

Erasure may be triggered automatically or manually:

- **Automatic Triggering of Erasure:** For example, a person's eligibility for erasure may be automatically evaluated when key events occur on that person's accounts. These events can include:
  - Adding a service agreement
  - Closing a service agreement
  - Canceling a service agreement
  - Reactivating a service agreement
  - Accepting a proposal service agreement
  - Declining a proposal service agreement
  - Reopening a proposal service agreement
  - Deleting a proposal service agreement
- **Manual Triggering of Erasure:** A customer may call in to request an agent or customer services representative to erase their personal information from the system.

A number of business objects, algorithms, algorithm types, scripts, and background processes are provided to support automatic and/or manual triggering of the erasure process for the following entities:

- Person
- Account
- Service Agreement
- User

For further details, refer to the **Data Privacy** and **Data Privacy Addendum** topics in the Oracle Utilities Customer Care and Billing user documentation.

**Note:** These capabilities are also available in Oracle Utilities Customer Care and Billing V2.6.0.1. Refer to the patch number 28043851 in My Oracle Support.

## Person Name Format Standardization

The **Person Name Validation** system event plug-in spot, on **Installation Options – Framework**, has been renamed to **Person Name Format**. The plug-in spot has also been enhanced to enable implementations to specify more than one algorithm for validating and formatting person names.

The existing algorithm type, **NMFM-VALFMT (Person Name Format)**, has been converted and enhanced to groovy scripting with the following capabilities:

- Validates the person's name contains a name separator character if the following conditions are true:
  - Person/Business flag is set to 'Person'
  - Name Type is set to 'Primary' or 'Legal'
  - Use Name Separator Character (Y, N) algorithm parameter is set to 'Y'

- Removes or trims extra spaces between words in a person's name to just one space and removes all spaces around the name separator (if applicable and Name Type is set to 'Primary' or 'Legal').
- Removes specific characters, not a specific string, in a person's name based on the list of defined characters in the applicable Person or Business related algorithm parameter if Name Type is set to 'Primary' or 'Legal'.

**Note:** Only one algorithm for the above algorithm type is recommended to be plugged in by an implementation.

In addition to the above, a new **Installation - Person Name Format** algorithm type, **C1-NMFMTFRS (Person Name Format - Find and Replace String)**, has been provided that searches for and replaces a specific string (or character) in a person's name as defined in the algorithm parameters. This may be configured to apply to the name of a Person and/or Business.

**Note:** For each string or character to be examined, an algorithm for the above algorithm type may be configured and plugged in by an implementation.

## Enhanced Case Management Validation Processing

The case management functionality may be used to manage a variety of multi-step business processes (example: high bill complaints, property inspections, literature request, etc).

Cases may be configured, as defined by their respective Case Type, to be linked to person, account, and/or premise record(s). Case Types hold the business rules that control cases. Previously, validation existed to ensure there was an existing relationship between account and person (if populated on a case).

In this release, implementations can specify on Case Types via the **Entity Relationship** setting, which validations, if any, are enforced. The options include:

- All
- Person and Account Only
- Premise and Account Only
- None

For implementations upgrading from previous versions, the **Entity Relationship** setting on existing Case Types is defaulted to enforce the 'Person and Account Only' validation to preserve the previous behavior. These may be updated by an implementation.

## Enhanced Account Bill/Payment History Page

The Account Bill/Payment History user interface has been upgraded to a portal zone, leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

A user is now able to download an account's bill and/or payment history to an Excel file format directly from the user interface.

**Note:** The number of rows to be exported is defaulted to 300. Implementations may override this value via the zone's **Excel Rows** override parameter value.

## Enhanced Account Financial History Page

The Account Financial History user interface has been upgraded to multi-query portal zones, leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

A user is now able to:

- Search and sort financial history by:
  - Arrears Date
  - Accounting Date
  - GL Extract Date
  - All Dates
- Download an account's financial history to an Excel file format directly from the user interface.

**Note:** The number of rows to be exported is defaulted to 300. Implementations may override this value via the applicable zone's **Excel Rows** override parameter value.

## Enhanced SA (Service Agreement) Financial History Page

The SA Financial History user interface has been upgraded to multi-query portal zones, leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

A user is now able to:

- Search and sort financial history by:
  - Arrears Date
  - Accounting Date
  - GL Extract Date
  - All Dates
- Download a service agreement's financial history to an Excel file format directly from the user interface.

**Note:** The number of rows to be exported is defaulted to 300. Implementations may override this value via the applicable zone's **Excel Rows** override parameter value.

## Auto-Canceling Aged Pending and Held Orders

Orders may be used to satisfy many diverse requirements. These can include:

- Enrolling new customers using a single transaction
- Selling new products to existing customers
- Setting up marketing surveys and recording customers' responses
- Quickly creating one-time charges

Orders may be created and saved in an incomplete state (pending or held) due to:

- All information required from a customer not being available to complete an order.
- A Customer Services Representative or Agent wishing to perform further research for the order.

A new batch control, **C1-CNPHO (Cancel Pending/Held Orders)**, is provided to enable an implementation to automatically cancel pending and/or held orders that have been open longer than a pre-configured number of days.

## Protecting Address Details on Adjustment A/P Requests

Adjustments may be created to refund money to a customer via an Accounts Payable (A/P) system. These adjustments are based on Adjustment Type(s) that reference an A/P Request Type.

When a refund adjustment is frozen, the related account's billing address is defaulted on the adjustment's A/P Request. The A/P Request details can then be interfaced to an A/P system to create a check to send to the customer.

Previously, users were able to update the adjustment's A/P Request's address details after the A/P request details had been interfaced to an A/P system. This led to potential discrepancy in address information between Oracle Utilities Customer Care and Billing and the A/P system while a refund was being processed.

Adjustments has been enhanced so the address fields are now disabled on an adjustment's A/P Request, and therefore address details cannot be updated, after the A/P Request details have been interfaced to an A/P system (i.e., adjustment's A/P Request's **Payment Selection Status** is not equal to 'Not Selected for Payment'). If a user needs to update the address details after an adjustment's A/P Request details have been interfaced to the A/P system, they will need to:

- Cancel the payment in the A/P system (assuming it has not been sent to the customer).
- Cancel the adjustment in Oracle Utilities Customer Care and Billing.
- Update the account's billing address details.
- Create/freeze a new adjustment to capture the new address details.

## Protecting Field Activity Type on Dispatched Field Activities

Field activities may be used to initiate requests for specific types of field work to be undertaken (example: device installation, pole replacement, device removal, meter read, etc). The field work details may then be dispatched to the appropriate field crew to perform the work.

Previously, it was possible for a user to change the type of work to be undertaken (FA Type) for a field activity after the field work details had been dispatched. A warning was displayed to the user but a change was still able to be made. By changing the FA Type on a field activity, this potentially led to:

- Incorrect crew assignment (skills/equipment)
- Insufficient scheduled work time being allocated

Field work has been enhanced so an implementation can configure if the FA Type on a dispatched field activity can be changed. This is via a Dispatch Group's **Allow FA Type Change When Dispatched** setting and caters for the following two scenarios:

- Field activities dispatched via field orders from Oracle Utilities Customer Care and Billing - If the field order's Dispatch Group does not allow the FA Type to be changed on a dispatched field activity, an error message is displayed to the user.
- Field activities dispatched via an external system (example: workforce management system) - An implementation is able to configure interim / intermediate field activity status values where a user is not allowed to change the FA Type on a dispatched field activity.

Each status can be configured against the **Intermediate Status to Prevent FA Type Change** option type on a Dispatch Group's referenced **FA Integration Feature Type** feature configuration. Validation occurs to ensure the **Intermediate Status to Prevent FA Type Change** option value corresponds to a valid lookup value for the field **FA\_INT\_STATUS\_FLG (Field Activity Intermediate Status)**. These interim/intermediate status values are managed and passed through by an external system and recorded on the field activity.

**Note:** **FA Integration Feature Type** feature configuration option values for the following option types are also validated to ensure that they are valid lookup values for the field **FA\_INT\_STATUS\_FLG (Field Activity Intermediate Status)**:

- Intermediate Status To Prevent FA Cancel
- Intermediate Status To Skip Message

For implementations upgrading from previous versions, the **Allow FA Type Change When Dispatched** setting on existing Dispatch Groups is defaulted to 'Allowed' to preserve the previous behavior. These may be updated by an implementation.

## Capturing Billable Charge Template on Billable Charges

Billable Charges may be used to charge customers for services that occur outside the normal course of business for an implementation (example: charging a contractor for the repair of a ruptured gas line, tree-trimming charges, etc).

Users may optionally use billable charge templates to create billable charges. Billable charge templates exist to minimize the effort required to create billable charges. A billable charge template contains the default bill lines, amounts and distribution codes used to levy a one-off charge.

Previously, the billable charge template used to create a billable charge was not captured on the billable charge itself. Billable charges has been enhanced to capture the **Billable Charge Template**.

It should be noted that users are still able to override or remove information on a billable charge defaulted from the billable charge template. As a result, the information on the billable charge may not resemble that initially defaulted from the template. Regardless, the billable charge template used to create the billable charge is still captured.

## Supporting Additional Automated Clearing House (ACH) File Extract Source Values

The system supports two auto pay extract processes to extract payment information, into flat files, that can be interfaced to automated clearing houses (ACH).

Three new dedicated fields, for storing existing values, have been added to Auto Pay Route Type. The new fields include:

- **Company ID:** This was previously mapped from the Auto Pay Route Type's tender source's bank account's account number.
- **Company Entity Name:** This was previously mapped from the Auto Pay Route Type's tender source's bank's description.
- **Company Entity Description:** This was previously hard coded to "PAYMENTS".

The **Auto Pay Route Type** user interface has been upgraded to a portal and zones, leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

Additionally, the above values specified on Auto Pay Route Type can be overridden by CIS Division. The system processes that use these values have been updated to check for CIS Division Override Controls if they exist. The extract processes, **APAYACH (Auto Pay Extract)** and **C1-APACH (Auto Pay Extract - ACH (with offset days parameter))**, have been updated to include an optional parameter for CIS Division. To extract auto pay records by CIS Division, a unique batch control is needed for each CIS Division and the CIS Division must be configured with the Auto Pay Route Type Override Controls.

For implementations upgrading from previous versions, existing Auto Pay Route Types that reference a batch control that references the base-package provided extract programs will be updated to populate the new fields with the values from the old source fields.

## Enhanced Point of Sale (POS) Printer Integration Support

Oracle Utilities Customer Care and Billing provides support to facilitate the integration with an implementation's Point of Sale (POS)/special cashiering station printers.

The support for integration enables implementations to endorse checks and print receipts. Print functions are available from the following transactions:

- Payment Event
- Payment Quick Add
- Payment Event Quick Add

In this release, the print functions have been enhanced so interfacing to Point of Sale (POS) / special cashiering station printers are initiated using Business Process Assistant (BPA) scripts (previously, this relied on JavaScript code). New user interfaces are also provided for the user to select the required action.

## Enhanced Third Party Payment Processing

In a previous release, capabilities for supporting third party payment processing were provided.



A third party payment processing system is a service provider that can handle all aspects of electronic payments for a utility. When this service provider is integrated with Oracle Utilities Customer Care and Billing, every payment made through channels such as web self-service or integrated voice response (IVR) is accepted and processed within the service provider's fully hosted payment acceptance environment. In this arrangement, payment data (credit card number, bank account number, etc) is stored and processed outside of the utility's network.

In this release, the **C1-ThirdPartyVerifyAccount** inbound web service for supporting account verification has been enhanced to return an account's active / effective auto pay information, if it exists, to the third party payment processing system. This will help in assisting to prevent certain error conditions such as attempting to add an auto pay record that overlaps an existing auto pay record.

## Enhanced Write Off Transfer Processing

In some implementations, deposit and / or payment arrangement service agreements are configured to belong to the 'main' Write Off Debt Class. In such a scenario, there is the possibility that deposit and / or payment arrangement service agreements may be recipients of transfer adjustments from stopped service agreements that are subject to write off processing (example: balances from other service agreements may be transferred to these service agreements).

In this release, the WO TRANSFER (Transfer to Other Active SA) algorithm type has been enhanced to enable almost all of an account's service agreements to belong to the same Write Off Debt Class and the algorithm type to determine which service agreements can:

- Be eligible for write off transfers
- Receive debit transfer balances only
- Receive credit transfer balances only or
- Never be eligible for write off transfers

A new **C1-LWXFR (Limit Write Off Transfer)** Characteristic Type is provided that can be configured on Service Agreement (SA) Types to limit write off transfers to specific service agreements. Examples include:

- Service agreements belonging to Deposit or Payment Arrangement related SA Types should not be recipients of write off transfers
  - There are already mechanisms in place for these service agreements to have their balances zeroed out before they are picked up in write off processing
  - On these SA Types, the above characteristic should have its value set to 'NEVER'.
- Service agreements belonging to Overpayment related SA Types should only be recipients of credit write off transfers (i.e., no debit balance should be placed on these service agreements)
- On these SA Types, the above characteristic should have its value set to 'CREDIT'.

Refer to the **Detailed Description** on the **WO TRANSFER (Transfer to Other Active SA)** algorithm type for further details.

## Merging Billing and Credit & Collections Batch Controls

In the last release, pairs of batch controls existed for many billing and credit and collection processes.

The newer of each pair, introduced in Oracle Utilities Customer Care and Billing V2.6.0.0, utilized the plug-in driven batch functionality (exposing the select record logic only) and an optional batch parameter to support processing by CIS Division.

As referenced in the Release Notes for Oracle Utilities Customer Care and Billing V2.6.0.1, the elder of each pair (the original batch controls) have now been upgraded to the newer functionality mentioned above. These include:

- BILLING – Create Bills Using Bill Cycle
- ADM – Account Debt Monitor (refer below for additional enhancement details)
- CET – Collection Event Trigger
- CPM – Collection Process Monitor
- C1-ADMOV – Overdue Monitor
- SEC – Severance Event Completion
- SED – Severance Event Set Dependency Date
- SET – Severance Event Trigger
- WET – Write off Event Trigger
- WPM – Write off Monitor

For implementations upgrading from previous versions, the upgrade process will remove any of the newer batch controls introduced in Oracle Utilities Customer Care and Billing V2.6.0.0 (including associated To Do Types) if they have not been used. If any of the newer batch controls have been used, the upgrade process will update the **Owner Flag** to 'Customer Modification' on the used batch controls (including associated To Do Types).

The **ADM** (Account Debt Monitor) batch control has also been enhanced to include a new **Include Minimum Days Review (Y/N)** batch parameter. This essentially merges the logic between batch controls **ADM** (Account Deb Monitor) and **ADM2** (Account Debt Monitor, Minimum Days Review). The default setting is set to blank (N); however if configured to 'Y', then the same select criteria/logic in **ADM2** will be executed.

For implementations upgrading from previous versions and currently executing **ADM2**, the following two options are recommended:

- Configure and execute **ADM** with the **Include Minimum Days Review (Y/N)** batch parameter set to 'Y'. This option is recommended if **ADM** and **ADM2** are currently executed at the same frequency. Using this approach, **ADM2** may be removed from the overall batch schedule.
- Configure and execute **ADM** with the **Include Minimum Days Review (Y/N)** batch parameter set to 'N' and also execute **ADM2**. This option is recommended if **ADM** and **ADM2** are currently executed or will be executed at different frequencies.

## Specific Algorithm Types Converted to Groovy Scripting

The following algorithm types, which are commonly cloned by implementations to include implementation-specific requirements, have been converted to groovy scripting to assist in reducing total cost of ownership:

- Adjustment Type – Adjustment FT Creation: ADJT-TA (Payoff=Adj Amt/Current=0)
- Adjustment Type – Resolve Suspense: C1-CANSUSADJ (Cancel Suspense Adjustment)
- Customer Class – LPC Eligibility Rule: BILPE-ALL (Determine if the Amount is Sufficient to Levy LPCs)
- Distribution Code – GL Account Construction: FGLCNSTR-D (Get the GL Account from the Distribution Code)
- SA Type – SA Renewal: SARN-NB (NBB SA Renewal)
- SA Type – SA Stop: SAST-NB (Stop Non-Billed Budget)

## Batch Control for Renumbering Service Route Sequences

In previous releases, the batch control **C1-RMRCS** (Renumber Service Route Sequences) was generally only made available, via patches, from My Oracle Support.

The batch control may be used to renumber the read sequences, on service points, in a given service cycle and service route. It is recommended for use when the service route to re-sequence includes a large number of service points.

The batch control provides similar functionality as the online page for renumbering service route sequences. Refer to the **Renumber Service Route Sequences** section in the Oracle Utilities Customer Care and Billing User Documentation for more details.

## Specific Batch Controls Enhanced to Reference File Storage Configuration Extendable Lookup

In this release, a **F1-FileStorage** (File Storage Configuration) Extendable Lookup is available that provides implementations with an alternate option for defining native file storage locations. The following batch controls and associated business components have been enhanced to enable use of new Oracle Utilities Application Framework File Adapter APIs supporting the above extendable lookup.

- Batch Control: DWLDBILC (Download Billable Charge)
- Batch Control: C1-BSYEX (Billing Data Extract for DataConnect)
- Batch Control: C1-TAPDF (Third Party Auto Pay Confirmations)
- Batch Control: C1-TAPCN (Third Party Auto Pay Cancellations)
- Batch Control: C1SAFTPT (SAFT-PT Audit Extract)
- Batch Control: C1-SDDCE (SEPA Direct Debit Payment Extract)
- Batch Control: POSTROUT (Postal Bill Routing)
- Batch Control: FAXROUT (Fax Routing)

## Miscellaneous Updates

### Updating Batch Category

In a previous release, a number of Batch Controls were either missing Batch Category values or they were set incorrectly.

In this release, the following updates are applied to upgrading implementations only:

- C1-TAPCN (Third Party Auto Pay Cancellations): Batch Category set to 'Process What's Ready'
- C1-TAPDF (Third Party Auto Pay Confirmations): Batch Category set to 'Process What's Ready'
- C1-TOPPP (Third Party One Time Payment Controls Pre-Processing): Batch Category set to 'Process What's Ready'
- C1-TCRNB (Transition OCBG for Replacement Read Process): Batch Category set to 'Monitor'
- C1-RMRCS (Renumber Service Route Sequences): Batch Category set to 'Ad Hoc'
- C1-BLACC (Create Bill for a Single Account): Batch Category set to 'Ad Hoc'

The Batch Category values may be updated by an implementation.

### Updating Batch Default Parameter Values

In a previous release, the **C1-TCRNB** (Transition OCBG for Replacement Read Process) batch control did not have default parameter values set.

In this release for upgrading implementations only, default parameter values will be applied if implementation-specific values have not been set already.

### Updating Algorithm Entity / System Event Descriptions

A number of **Algorithm Type - Algorithm Entity** descriptions have been updated as follows:

- From 'Installation – Online Field Order Image' to 'Installation – Online Field Order Display'
- From 'Installation – Online Letter Image' to 'Installation – Online Letter Display'
- From 'Installation – Online Statement Image' to 'Installation – Online Statement Display'
- From 'SA Type – Determine Proration' to 'SA Type – Override Proration Days'

A number of **Installation Options - Framework system event** (Install Algorithm Entity) descriptions have been updated as follows:

- From 'Online Field Order Image' to 'Online Field Order Display'
- From 'Online Letter Image' to 'Online Letter Display'
- From 'Online Quote Image' to 'Online Quote Display'

- From 'Online Statement Image' to 'Online Statement Display'

One **SA Type- Algorithm system event** (SA Type Algorithm Entity) description has been updated as follows:

- From 'Determine Proration' to 'Override Proration Days'

## 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.

- [Updated System Data Details](#)
- [Portal Zone: C1-POSPOUBLST](#)
- [Business Service: C1-RetrieveCISDivisionList](#)

## Updated System Data Details

This section describes change made to the system data configuration.

### New Columns

Table_Name	Column_Name	Comment
C1_CIS_DIV_RTYP	APAY_RTE_TYPE_CD	CHAR(10)
C1_CIS_DIV_RTYP	ENCR_OVRD_CO_ID	VARCHAR2(64)
C1_CIS_DIV_RTYP	OVRD_CO_ENTITY_DE SCR	CHAR(10)
C1_CIS_DIV_RTYP	OVRD_CO_ID	CHAR(10)
C1_CIS_DIV_RTYP	OVRD_CO_NAME	VARCHAR2(23)
C1_CIS_DIV_RTYP	OVRD_TNDR_SOURCE_ CD	CHAR(8)
CI_APAY_RT_TYPE	BO_DATA_AREA	CLOB
CI_APAY_RT_TYPE	BUS_OBJ_CD	CHAR(30)
CI_APAY_RT_TYPE	CO_ENTITY_DESCR	CHAR(10)
CI_APAY_RT_TYPE	CO_ID	CHAR(10)
CI_APAY_RT_TYPE	CO_NAME	VARCHAR2(23)
CI_APAY_RT_TYPE	ENCR_CO_ID	VARCHAR2(64)
CI_BATCH_RUN	END_DTTM	DATE
CI_BATCH_RUN	START_DTTM	DATE
CI_BILL_CHG	BILL_CHG_TMPLT_CD	CHAR(8)
CI_CASE_TYPE	ENTITY_REL_FLG	CHAR(4)

Table_Name	Column_Name	Comment
CI_CC	ILM_ARCH_SW	CHAR(1)
CI_CC	ILM_DT	DATE
CI_CC_TYPE	CUSTOM_ARCH_ELIG_ CRIT_FLG	CHAR(4)
CI_DISP_GRP	ALW_FA_TYPE_CHG_FL G	CHAR(4)
CI_LETTER_TMPL	BO_DATA_AREA	CLOB
CI_LETTER_TMPL	BUS_OBJ_CD	CHAR(30)

### Column Format Change

Table_Name	Column_Name	From	To
CI_CALC_RULE	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_BSEG_ITEM	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_CHTY_ITTY	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_CHTY_SPTY	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_DV_TTYP_ITEM M	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_FS_CTRL	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_FS_DGRP	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM_CHTY_ VW	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM_SQ_EST	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM_TYP_C HA	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM_TYPE	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM_TYPE_ EQ	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_ITEM_TYPE_ EQ	ITEM_TYPE_CD_E Q	CHAR(8)	VARCHAR(30)
CI_ITEM_TYPE_L	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_MTR_TYPE_E Q	ITEM_TYPE_CD_E Q	CHAR(8)	VARCHAR(30)
CI_MULT_ITEM	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_PKG_SA_TYP E	SP_TYPE_CD	CHAR(8)	VARCHAR(30)

Table_Name	Column_Name	From	To
CI_RC	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SA_SP_TYPE	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SP	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SP_CHTY_VW	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SP_TYPE	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SP_TYPE_CH AR	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SP_TYPE_EQ	ITEM_TYPE_CD_E Q	CHAR(8)	VARCHAR(30)
CI_SP_TYPE_EQ	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SP_TYPE_L	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SPTY_ITEMTY	ITEM_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SPTY_ITEMTY	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_SPTY_MTRTY	SP_TYPE_CD	CHAR(8)	VARCHAR(30)
CI_APPR_REQ_ LOG	DESCRLONG	VARCHAR(20 00)	VARCHAR(4000)
CI_MR_RTE_SEC	MR_RTE_CD	CHAR(8)	CHAR(16)
CI_MR_RTE_SEC	MR_CYC_CD	CHAR(4)	CHAR(16)
C1_CALC_RULE_ MBR_CAT	CL_CAT_VAL	VARCHAR(60 )	VARCHAR(30)
C1_CALC_RULE_ TRGT_CAT	CL_CAT_VAL	VARCHAR(60 )	VARCHAR(30)

- Index XT007S3 was added to table CI\_BCHG\_UP, field: SA\_ID, non-unique
- Index XT057S6 was added to table CI\_CC, field: C1\_CONTACT\_ID, non-unique

## Portal Zone: C1-POSPOUBLST

Zone's application service was updated from **C1POTTPB** (to be deleted) to **C1POTTYP** (Product Offer Main tab's application service).

Application Service **C1POTTPB** was converted to **CM** (for upgrading customers).

## Business Service: C1-RetrieveCISDivisionList

Business Service C1-RetrieveCISDivisionList was linked to deprecated CILTCIDL. In this release it is updated to be linked to new Java service RetrieveCISDivisionService.java.

New Service Program C1-GETCISDIVISIONS was added.

## System Data Modifications For Upgrade From Previous Versions

The table below lists upgrade scripts delivered with older releases of Oracle Utilities Customer Care and Billing. It also lists the changes made by these scripts to system data (business objects, algorithms etc).

Release	Pre-Upgrade Scripts	Mid-Upgrade Scripts	Post-Upgrade Scripts
2.4.0.2	<ul style="list-style-type: none"> <li>24020_C1_BP_BpSch ema1.sql - drops tables like 'C1_INITIATIVE_ LEAD_CRIT%'</li> <li>24020_C1_BP_BpSch ema2.SQL - modifies SRCH_CHAR_VAL to VARCHAR2(50) from CHAR</li> </ul>	None	<ul style="list-style-type: none"> <li>24020_C1_AP_apData1 .sql - UPDATE CI_FK_REF SET INFO_PRG='com.sp lwg.base.dom ain.common.foreignK eyReference. GenericMOInfoRetrie ver' WHERE FK_REF_CD IN ( 'C1MRSCHD','C1PO STDF', 'C1- TOUB2', 'C1- BFVL2','C1DEGDA Y', 'C1FLVL12','C1FLVL 23', 'C1FSVCTL','C1HIL OF2', 'C1-ITSQE', 'C1- CCORL', 'C1SATRLT') AND INFO_PRG='com.sp lwg.base.dom ain.common.foreignK eyReference. DescriptionRetriever'</li> <li>24020_C1_AP_APDAT A2.SQL - UPDATE CI_FK_REF SET ZONE_CD = 'C1- FATYPEQ' WHERE FK_REF_CD = 'C1- FATYP' AND ZONE_CD = ''</li> </ul>



Release	Pre-Upgrade Scripts	Mid-Upgrade Scripts	Post-Upgrade Scripts
2.4.0.3	None	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 24030_BUG_20878127.S QL</li> <li>• 24030_BUG_21165656.S QL</li> <li>• 24030_BUG_21165656_2.SQL</li> </ul>	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 24030_BUG_18906800.SQL</li> <li>• 24030_BUG_19162075.SQL</li> <li>• 24030_BUG_20023780.SQL</li> <li>• 24030_BUG_20426547.SQL</li> <li>• 24030_BUG_21078919.SQL</li> <li>• 24030_BUG_19707998.SQL</li> </ul>
2.5.0.0	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 25000_BUG_20778819_APPSVC_TO_C M.SQL</li> </ul>	None	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 25000_BUG_19884554.SQL</li> <li>• 25000_BUG_19360619.SQL</li> <li>• 25000_BUG_20029650.SQL</li> <li>• 25000_BUG_20301006.SQL</li> </ul>
2.5.0.1	25010_C1_BP_BpSchema1.SQL - renames column CONTACT_ID TO C1_CONTACT_ID	None	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 25010_BUG_21482753.SQL</li> </ul>
2.5.0.2	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 25020_BUG_22923270.SQL</li> <li>• 25020_BUG_23171347.SQL</li> <li>• 25020_BUG_23185566.SQL</li> <li>• 25020_BUG_23333064.SQL</li> <li>• 25020_BUG_23340914.SQL</li> </ul>	None	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 25020_BUG_22076980.SQL</li> <li>• 25020_BUG_23126046.SQL</li> <li>• 25020_BUG_23171347_2.SQL</li> <li>• 25020_BUG_23333266.SQL</li> </ul>

Release	Pre-Upgrade Scripts	Mid-Upgrade Scripts	Post-Upgrade Scripts
2.6.0.0	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 26000_BUG_2352281 7.SQL</li> <li>• 26000_BUG_2573590 7.sql</li> </ul>	None	<ul style="list-style-type: none"> <li>• 26000_BUG_24312969.SQL</li> <li>• 26000_BUG_25143834.SQL</li> <li>• 26000_BUG_25646627.SQL</li> <li>• 26000_BUG_25578850.SQL</li> <li>• 26000_BUG_25735862.sql</li> <li>• 26000_BUG_25138293.SQL</li> <li>• 26000_BUG_25839535.SQL</li> <li>• 26000_BUG_24922723.SQL</li> </ul>
2601	Please refer to the bug itself: <ul style="list-style-type: none"> <li>• 26010_BUG_2630076 5.SQL</li> <li>• 26010_CCB-2104.SQL</li> </ul>	None	<ul style="list-style-type: none"> <li>• 26010_CCB-2711.SQL</li> <li>• 26010_CCB-2915.SQL</li> <li>• 26010_CCB-2916.SQL</li> <li>• 26010_CCB-2921.SQL</li> <li>• 26010_CCB-2918.SQL</li> <li>• 26010_CCB-2917.SQL</li> </ul>

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<b>Release</b>	<b>Pre-Upgrade Scripts</b>	<b>Mid-Upgrade Scripts</b>	<b>Post-Upgrade Scripts</b>
2700	<ul style="list-style-type: none"><li>• 27000_CCB-4431.SQL</li><li>• 27000_CCB-4738.SQL</li><li>• 27000_CCB-4907_1.SQL</li><li>• 27000_CCB-5207.SQL</li><li>• 27000_CCB-5927.SQL</li><li>• 27000_CCB-5929.SQL</li><li>• 27000_CCB-5469.SQL</li><li>• 27000_CCB-6309.SQL</li><li>• 27000_CCB-4733.SQL</li><li>• 27000_CCB-6272.SQL</li><li>• 27000_CCB-6272_1.SQL</li></ul>		<ul style="list-style-type: none"><li>• 27000_CCB-4518.SQL</li><li>• 27000_CCB-4738_1.SQL</li><li>• 27000_CCB-4907.SQL</li><li>• 27000_CCB-5112.SQL</li><li>• 27000_CCB-5108.SQL</li><li>• 27000_CCB-5927_1.SQL</li><li>• 27000_CCB-6263.SQL</li><li>• 27000_CCB-6617.SQL</li><li>• 27000_CCB-5928.SQL</li><li>• CCBALL_Fill_Algo_Parms.sql</li></ul>

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## Known Issues in This Release

This section lists known issues and bugs not fixed in this release of Oracle Utilities Customer Care and Billing and Oracle Utilities Application Framework.

- [Known Issues in Oracle Utilities Customer Care and Billing](#)
- [Bug Fixes Not Included in This Release](#)
- [Known Issues in Oracle Utilities Application Framework](#)

### Known Issues in Oracle Utilities Customer Care and Billing

Following are the known issues in Oracle Utilities Customer Care and Billing at the time of this release:

Bug #	Description
28507078	SA Financial History: Navigation from Account context menu and the load of searches between different query types are not working correctly.

### Bug Fixes Not Included in This Release

This section lists bug fixes released for previous versions of the product that have not been included in this release. These fixes are planned for a future date for the current release using the bug numbers listed in the table below:

Original Bug	Original Version	Description	2.7.0.0.0 Post-Release
25896444	2.4.0.3.0	If a person with override address is linked to an account (on which Address Source is set to Person) and the override address has been removed, no warning is shown on the <b>Person</b> page.	27987259
27661646	2.5.0.2.0	Some scenarios related to a payment made after the SA End Date and prior to write-off are incorrect.	27723946

### Known Issues in Oracle Utilities Application Framework

The following are the known issues in this version of Oracle Utilities Application Framework which affect Oracle Utilities Customer Care and Billing 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.BubblingAbbrevier\$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.

- [Deprecated Functionality in This Release](#)
- [Deprecated Functionality Planned For Future Releases](#)

### Deprecated Functionality in This Release

The platforms and functionality listed below are not supported by this version of Oracle Utilities Customer Care and Billing:

#### CIS Division

In a previous release, the CIS Division user interface was upgraded to a portal and zones, leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

In this release, the old code supporting the previous user interface has been deprecated.

- Record CICTCIDH
- Record CICTCIDS
- Program CIPTCIDS
- Program CIPTCDCL
- Program CIPTCIDL
- Program CIPTDTRL
- Program CIPTCIDW
- Program CIPTCDCL
- Program CIPTCIDL
- Program CIPTDTRL
- Program CIPTCIDW
- UI CIS Division page and search
- Program Service CILTCLDL

#### Portal C1POTTPB

Portal C1POTTPB is unused and it is removed.

In this release, the old code supporting the previous user interface has been deprecated.

- Navigation Option c1pottpbTabMenu
- Navigation Key c1pottpbTabMenu
- Service Program C1POTTPB
- Application Service C1POTTPB
- Program Component C1POTTPBPG (used by Help navigation key)
- Program Component C1POTTPBTM
- Portal C1POTTPB

## Deprecated Functionality Planned For Future Releases

The following platforms and functionality will not be supported in future releases of Oracle Utilities Customer Care and Billing:

### Letter Template

In this release, the Letter Template user interface has been upgraded to a portal and zones, leveraging the Oracle Utilities Application Framework's Configuration Tools' capabilities.

In a future release, the old code supporting the previous user interface is planned to be deprecated.

### Auto Pay Route Type

In this release, the Auto Pay Route Type user interface has been upgraded to a portal and zones, leveraging the Oracle Utilities Application Framework's Configuration Tools' capabilities.

In a future release, the old code supporting the previous user interface is planned to be deprecated.

### Download Collection Agency Referral (DWLDCOL) Batch Control

In a previous release, a configurable collection agency referral download extract **C1-CAGYX** (Collection Agency Referral Extract), batch control was made available to supersede the **DWLDCOL** (Download Collection Agency Referral) batch control.

In a future release, the **DWLDCOL** (Download Collection Agency Referral) batch control is planned to be deprecated.

### Create Autopay Tender Controls (BALAPY) Batch Control

In a previous release, the **C1-BLAPY** (Create Autopay Tender Controls) batch control was made available to create tender and deposit controls for automatic payments that excludes payments associated with a Third Party Payment Processing System. This batch control duplicates the logic in the **BALAPY** (Create Autopay Tender Controls) batch control.

In a future release, it is planned for the functionality in these two batch controls to be merged.

### **Account Bill/Payment History**

In this release, the Account Bill/Payment History user interface has been upgraded to a portal zone, leveraging the Oracle Utilities Application Framework's Configuration Tools' capabilities.

In a future release, the old code supporting the previous user interface is planned to be deprecated.

### **Account Financial History**

In this release, the Account Financial History user interface has been upgraded to multi-query portal zones, leveraging the Oracle Utilities Application Framework's Configuration Tools' capabilities.

In a future release, the old code supporting the previous user interface is planned to be deprecated.

### **SA (Service Agreement) Financial History**

In this release, the SA (Service Agreement) Financial History user interface has been upgraded to multi-query portal zones, leveraging the Oracle Utilities Application Framework's Configuration Tools' capabilities.

In a future release, the old code supporting the previous user interface is planned to be deprecated.

## **Supported Integrations**

The following integrations are supported in this version of Oracle Utilities Customer Care and Billing:

### **Oracle Application Integrations**

- CCB V2.7.0.0.0 to E-Business Suite (Revenue Accounting) V12.2.2+
- CCB V2.7.0.0.0 to PeopleSoft (Financials) V9.2
- CCB V2.7.0.0.0 to JD Edwards (Enterprise One) V9.1

### **Oracle Utilities Product Integrations**

- CCB V2.7.0.0.0/Oracle Utilities Analytics V2.6.0
- CCB V2.7.0.0.0 to Oracle Utilities Meter Data Management V2.1.0.3+, V2.2.0.x
- CCB V2.7.0.0.0 to Oracle Utilities Network Management System V2.3.0.x or V1.12.0.3+
- Oracle Integration Pack for Oracle Utilities Field Work V12.2

- Oracle Utilities Mobile Workforce Management V2.3.0.x or V2.2.0.2+
- Oracle Utilities Work and Asset Management V1.9.1.x, V2.1.1x or V2.2.0.x

## Additional Integrations

- Oracle Documaker V12.5
- Oracle Dataraker V3.8.0.2
- BI Publisher V12c
- Oracle Utilities Customer Self Service V2.2.0.0

## Demo Data Information

The application delivers a demo database based on the application versions provided with the release, including Oracle Utilities Application Framework. Demo data provides sample configuration and data for key application features.

Demo data is included in the package and includes its own installation instructions. Please refer to the *Oracle Utilities Customer Care and Billing Installation Guide* for more information or contact Oracle Support.



# Oracle Utilities Application Framework v4.3.0.6.0 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 enhanced 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 define 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.

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## 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.

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## 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 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 storage.

#### Key Resources

Refer to **Support for Cloud Storage Access** on page 1-28 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.

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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 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 v4.3.0.6.0, 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.