Oracle Utilities Customer Care and Billing

Release Notes

Release 2.6.0.1.0

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Oracle Utilities Customer Care and Billing Release Notes, Release 2.6.0.1.0

Contents

Preface

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

Audience

Release Notes 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 V2.6.0.1.0 Release Notes*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Quick Install Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Installation Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Database Administrator's Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Optional Products Installation Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Licensing Information User Manual*

Administrative and Business User Guides
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Administrative User Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Business User Guide*

Supplemental Documents
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Server Administration Guide*
- *Oracle Utilities Customer Care and Billing V2.6.0.1.0 Security Guide*

Conventions

The following text conventions are used in this document:

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

Release Notes

This document provides general information about this release of Oracle Utilities Customer Care and Billing, including new functionality, known issues, and other important information.

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

This guide includes the following:

- Release Overview
- Database Changes
- Enhancements in Oracle Utilities Customer Care and Billing
- System Data Details
- Known Issues
- Deprecation Notices
- Supported Integrations
- Demo Data Information
- Oracle Utilities Application Framework v4.3.0.5.0 Release Notes

Release Overview

This section provides general information about this Oracle Utilities Customer Care and Billing V2.6.0.1.0 release. The release includes the following components:

- Oracle Utilities Customer Care and Billing version 2.6.0.1.0
- Oracle Utilities Application Framework version 4.3.0.5.0

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 V2.6.0.1.0 to ensure you have the most current version of this product.

Supported Platforms

See the **Supported Platforms** section of 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 upgrade paths:

- From Oracle Utilities Customer Care and Billing v2.6.0.0 to v2.6.0.1.0
- From Oracle Utilities Customer Care and Billing v2.5.0.2 to v2.6.0.1.0
- From Oracle Utilities Customer Care and Billing v2.4.0.3 to v2.6.0.1.0
- From Oracle Utilities Customer Care and Billing v2.3.1.10 to v2.6.0.1.0

Database Changes

The database enhancements for version 2.6.0.1.0 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 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
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.

Table Name	Columns	Comment
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

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:

- Management Dashboard

- Customer Care and Billing Features Related Enhancements

- Integration Support Related Enhancements

- User Interface Enhancements

- Miscellaneous Enhancements

- Configuration Migration Assistant (CMA) Enhancements

Management Dashboard

Customer Operational Dashboard

The Customer Operational Dashboard provides an overview of batch performance and status of key business processes. It provides day-to-day statistics that are of interest to management and end users.

The dashboard can be used to:

- Track and view the duration of key batch processes or grouping of processes and how they relate to a defined performance target.
- View trends related to Bills, Payments and To Do Entries.

Customer Care and Billing Features Related Enhancements

Customer Contact Type - Add Person / Account / Premise Usage Options

Customer contacts can be used to record interactions between a customer and an organization. Historically, customer contacts were associated directly with persons. In the previous release, premise and account were added to customer contact.

In this release, on Customer Contact Types implementations can specify whether person, account and/or premise are required, optional, or not allowed for related customer contacts. For customers upgrading from the previous version, all existing customer contact types are defaulted to 'optional'.

Customer Contact Type - Relationship Validation

In the previous release, when premise and account were added to customer contact, validations were added to ensure there is an existing relationship between person and account and between account and premise.

In this release, on Customer Contact Types, implementations can specify which of these validations, if any, are enforced. For customers upgrading from the previous version, existing customer contact types are set to enforce all validations.

Enhanced Multi Cancel / Rebill Transaction

The Multi Cancel/Rebill transaction is used to cancel/rebill (and freeze) one or more bill segments linked to a service agreement. Previously, the transaction could only be used to cancel/rebill a single bill segment at a time where the related service agreement required bill determinants from a meter data management application.

In this release, the Multi Cancel/Rebill transaction has been enhanced to enable the cancelling/rebilling (and freezing) of multiple bill segments that are linked to a service agreement that requires bill determinants from a meter data management application.

Preventing Cancellation of Converted / Migrated Financial Transactions

In an implementation, it is common for financial transactions (such as bill segments, payment segments, adjustments and FTs) to be created in Oracle Utilities Customer Care and Billing for historical transactions existing in legacy customer information systems as part of the data conversion/migration process. This allows users to see sufficient financial history for a customer when Oracle Utilities Customer Care and Billing is in production.

In this release, a new algorithm type for the 'Customer Class - FT Freeze' plug-in spot is provided that can be used to prevent converted or migrated financial transactions from being cancelled. This prevention would occur when a user or process attempts to cancel historical bill segments, payments, or adjustments.

Enhanced Deposit Recommendation Algorithm Types

The Deposit Recommendation algorithm, defined in the 'Deposit Class – Deposit Recommendation' plug-in spot, is called when:

- A user requests a deposit calculation for a new deposit service agreement.

- The Deposit Review background process compares an account's existing deposit (if any) to the calculated recommended amount.

A number of algorithm types have been enhanced to cater for the scenario where there is insufficient billing history or estimated consumption cannot be calculated to determine a recommended deposit amount. In such scenarios, the system will retrieve the characteristic value for the Default Deposit Amount SA Characteristic Type. This value will then be subject to the Deposit Multiplier to determine the recommended deposit amount.

The 'Deposit Class – Deposit Recommendation' algorithm types that have been enhanced include:

- DEPRECOM-BA (Use Average Bill Amounts to Recommend Deposit)

- DEPRECOM-MBA (Recommend Deposit Based On Maximum Bill Amount)

- DEPRECOM-GSP (Deposit Recommendation for Gas Service Providers)

Enhanced Budget Calculation Algorithm Type

A Budget Calculation algorithm, defined in the 'Budget Plan – Budget Calculation' plug-in spot is called when the system calculates a customer's recommended budget amount. This can occur when:

- A user requests a new budget to be created for each applicable service agreement linked to a customer's account.

- A customer's budget billing plan is reviewed for a true up.

- A customer's budget billing plan is monitored to determine if the current budget amount is out of sync with the current recommended budget amount by a given defined tolerance.

The BUDCALC-BH (Budget Calc – Prem History (No Estimated Bills)) algorithm type has been enhanced to cater for the scenario where there is insufficient billing history to determine a recommended budget amount. In such scenarios, the system will retrieve the

characteristic value for the Default Budget Amount SA Characteristic Type and use this as the recommended budget amount (subject to rounding).

In addition to the above, the algorithm type has also been enhanced for an implementation to indicate whether a service agreement's current balance should be included in the calculation when determined a recommended budget amount.

Rate Calculation Group / Rule Processing Enhancement

Previously, while billing Service Agreements using bill determinants and rate version breaks existed within the total usage period, the rules on Pre-Processing and Post Processing Calculation Group(s) on the Rate Schedule were executed for each usage period. There was no way to indicate if the calculation rule should be executed once or per usage period.

In this release, a number of calculation rules have been enhanced to provide an indicator to allow an implementation to specify whether the calculation rule should be executed for the total usage period or for every usage period.

For more details, see the bug 27196318 Product Fix Design document.

United Kingdom Value Added Tax (VAT) and Climate Change Levy (CCL) Support in Rules Based Rating Engine

Previously, United Kingdom Value Added Tax (VAT) and Climate Change Levy (CCL) requirements were supported in the components-based rating engine.

In this release, the rules-based rating engine has been enhanced to support the United Kingdom's requirements for Value Added Tax (VAT) and Climate Change Levy (CCL).

Supporting 8 Decimal Places for Prices in Rate Calculations

A number of fields and associated code/configuration have been enhanced to support 8 decimal places. In particular, this relates to bill factor values and other values used in rate calculations.

> **Note**: For more information about the column format changes in this release, refer to the *Oracle Utilities Customer Care and Billing Database Administrator's Guide*.

Integration Support Related Enhancements

Enhanced CTI / IVR Integration Support

Oracle Utilities Customer Care and Billing provides tools to facilitate the integration with an implementation's Computer Telephony Integration/Interactive Voice Response (CTI/IVR) solution.

The interface provides capabilities to:

* Launch Control Central for a particular account ID or phone number from an external application.

* Accept the next call, as dictated by the CTI software.

- Perform an outbound phone call from within Oracle Utilities Customer Care and Billing.

Previously, the ability to launch Control Central for a particular account ID or phone number from an external application was enhanced so that it could be implemented using a Business Process Assistant (BPA) script.

In this release, the remaining two capabilities (Accept The Next Call and Perform An Outbound Phone Call) can be implemented using Business Process Assistant (BPA) scripts (where the interface relied on JavaScript code earlier).

Service for A/P Check Request Download Staging

An Adjustment can be used to initiate the process to refund money to a customer via an A/P Check Request. The A/P Check Request Download Staging table is used to interface details between Oracle Utilities Customer Care and Billing and an accounts payable application. After a check has been produced, the accounts payable application may provide check related information back to Oracle Utilities Customer Care and Billing.

In this release, a web service has been provided that can be used to update a A/P Check Request Download Staging record in Oracle Utilities Customer Care and Billing with check related information. Earlier, A/P Check Request Download Staging records could only be updated through direct SQL.

If an implementation requires a file-based integration approach, the underlying logic for the web service is also available and can be used by implementation-specific batch processes to update A/P Check Request Download Staging records.

Sending SA Relationship Related Information to Enable Synchronizing in Other Applications

In an implementation, it is critical to keep key data synchronized between Oracle Utilities Customer Care and Billing and other applications it may be integrated with. Examples can include a meter data management application, settlements application, etc.

SA Relationships are used to contain information about a specific relationship between a customer and a service provider/market participant.

In this release, enhancements have been provided to enable the sending of a service agreement's SA Relationship information to a meter data management application or settlements application. These applications can then update its corresponding usage transaction records with the relevant information. Based on the updated usage transactions, an implementation could then calculate usage that was billed for a particular service provider/market participant (for example).

Sending Usage's Bill Segment Related Information to Enable Additional Synchronization in Other Applications

In an implementation, it is critical to keep key data synchronized between Oracle Utilities Customer Care and Billing and other applications it may be integrated with. Examples can include a meter data management application, settlements application, etc.

In this release, enhancements have been provided to enable the sending of bill segment information related to Usage transactions to a meter data management application or settlements application. These applications may then update their corresponding usage

transactions with the related bill segment information. This will indicate whether the corresponding usage transaction was used on a bill and linked to a frozen bill segment.

The three main enhancements can be summarized as follows:

- A new background (batch) process, C1-UMUI (Update MDM Usage Information), to enable the sending of bill segment information for historical Usage transactions.

- The bill completion routine has also been updated to enable the sending of bill segment information when a bill is completed and there are frozen or cancelled bill segments linked to usage transactions.

- A new 'Customer Class - FT Freeze' algorithm type, C1-UPDMDMUSI (Update MDM Usage Information), is provided to enable the sending of bill segment information for a bill segment being frozen or cancelled that is linked to a usage transaction. This algorithm type caters for the scenario where bill segment information for usage transaction should be sent to a settlements application when a bill segment is being frozen or cancelled (not necessarily when the bill segment's bill is being completed).

Self-Service Related Enhancements - Storing and Updating Mailing Addresses

There are scenarios where a new customer would like to receive correspondence (for example: bills, letters, etc.) at a physical address that is different from their premise address. In this release, the STARTSTOP Self Service Task Type has been enhanced to enable the processing of a customer's mailing address, if provided in the incoming transaction. The mailing address details will be stored on the Account/Person record and the Address Source set as 'Account Override'.

In addition to the above, the logic behind the Maintain Mailing Address Information Inbound Web Service has been updated to store/update the mailing address on the Account/Person record and the Address Source set as 'Account Override'.

Self-Service Related Enhancements - Processing and Storing Multiple Person Identifier Records

As part of a self-service transaction to start a service for a new customer, there may be scenarios where more than one type of identification may be submitted.

In this release, the STARTSTOP Self Service Task Type has been enhanced to enable the processing of multiple types of identifications, if provided in the incoming transaction. Each type of identification will be stored on the Person record.

In addition to the above, one type of identification will be designated as a primary identifier type as per the configuration defined in the Oracle Utilities Customer Care and Billing Self Service Integration master configuration record.

User Interface Enhancements

Displaying Service Agreements in Control Central's Premise and Account Trees in Descending Chronological Order

In Oracle Utilities Customer Care and Billing, Control Central's Premise tree provides an overview of the accounts, service points, and service agreements (current and historical) linked to a premise. Similarly, Control Central's Account tree provides an overview of the persons, premises, and service agreements (current and historical) linked to the account. In both trees, service agreements were sorted by Service Agreement Identifier previously.

In this release, both Premise and Account Trees have been updated so both current and historical service agreements are shown in descending order (i.e. displaying the latest service agreement first) of start date and stop date (if populated).

Update Specific Portal Zones to Use Oracle JavaScript Extension Toolkit (JET)

In this release, the following UI Maps have been updated to remove the use of Yahoo! User Interface (YUI) Library components and make use of Oracle JavaScript Extension Toolkit (JET) components:

- C1-ServiceRequestDisplay (Service Order Management Overview Display Map)
- C1-RateScheduleTree (Rate Schedule Hierarchy)
- C1-DeviceDisplay (Device Display)

Miscellaneous Enhancements

Control Central Alert Navigation to Related Object Updates

In Oracle Utilities Customer Care and Billing, the Alert Zone is a grid that contains messages highlighting a variety of situations. Clicking on a hyperlink navigates the user to the appropriate page for the related object.

Previously, clicking specific hyperlinks in the Alert Zone, navigated the users to an object's search page/portal if there was one or more than one instance of the related object.

In this release, the following Control Central Alerts have been updated to navigate the user to the object's page/portal if there is only one instance of the related object. If there are multiple instances of an object, the user will continue to be navigated to the object's search page/portal.

The Control Central Alerts that have been updated relate to:

- Number of Pay Plans for a given status
- Number of Customer Contacts for a given Contact Type and Contact Class
- Open (non-final) Oracle Utilities Customer Self Service related service tasks

Configurable Collection Agency Referral Extract

Before debt is written off, many implementations refer unpaid bills to a collection agency in order to obtain payment. Collection agencies are notified of new referrals or the cancellation of referrals by collection agency referral history records. These records can be interfaced to a collection agency via a flat-file integration approach (for example).

In this release, a Configurable Collection Agency Referral Extract process has been provided. The base package supplied extract is able to be extended by an implementation, to meet their implementation-specific requirements, by leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

The extract can be formatted into the following: XML, delimited (such as CSV), and fixed position.

Configurable Letter Print Extract

Various system and user processes send letters to customers via customer contacts. These records can be interfaced to a letter print vendor via a flat-file integration approach (for example).

In this release, a Configurable Letter Print Extract process has been provided. The base package supplied extract is able to be extended by an implementation, to meet their implementation-specific requirements, by leveraging the Oracle Utilities Application Framework's Configuration Tools capabilities.

The base package contains the record types available in the previous letter print extract. Additionally four new extracts have been included that should accommodate many of the letter requirements. The original and new records types can be extended by the method mentioned. The records types extracted for each letter template are configurable. Additionally, within the new record types there are groups that can be configured to extract or not.

The extract can be formatted into the following: XML, delimited (such as CSV), and fixed position format.

Support for Universal Resource Identifiers (URIs) Validation and Substitution Variables

In Oracle Utilities Customer Care and Billing, there are a number of touchpoints/areas where reference parameters are in the form of Universal Resource Identifiers (URIs). These include file paths, URLs, etc.

In this release, a number of specific touchpoints/areas have been enhanced by calling a new Oracle Utilities Application Framework API that validates references against a whitelist of allowable references.

In addition to the above, the system also provides support to allow fields that capture URIs to reference a substitution variable for all or part of the URI definition. This allows system administrators to define the proper URI locations in a properties file whereas the configuration users only need to know the variable name.

The areas/touchpoints that have been enhanced include:

- Master/Transactional Objects
    - Characteristics - File Location Based Values
- Administration Objects

- Feature Configuration
  - General System Configuration Feature Type
    - DataRaker Environment Option Type value
    - DataRaker Role Option Type value
    - DataRaker Search Type Option Type value
    - DataRaker Server URL Option Type value
    - MDM URL Option Type value
- Analytics Extract
  - File Path Option Type value
- Batch Scheduler•
  - SMTP Port Number Option Type value
  - SMTP Server Name Option Type value
- Master Configuration
  - CC&B ODM Integration
  - CC&B Self Service Integration
  - RightNow Knowledge Integration
- Lead Event Types based on
  - Create Lead Email business object
  - Create Lead SMS business object
  - Create Sales Representative Email business object
- Base product owned Algorithm Types
  - C1-BLEX-BIP - BI Publisher Bill Extract Algorithm
  - C1-ADJAREQEM - Create Email for Adjustment Approval
  - C1-CAPREMAIL - Create Email for Rebate Claim Approval
  - C1-CREMAILTD - Create Email for To Do
- Base product owned Batch Controls•
  - APAYACH - Auto pay extract - ACH
  - APDL - Accounts payable download
  - C1-APACH - Auto pay extract - ACH (with offset days parameter)
  - C1-BSYEX - Billing Data Extract for DataConnect
  - C1-SASYX - SA-Based Extract for DataConnect
  - C1-SDDCE - SEPA Direct Debit Payment Extract
  - C1-SMSYX - Meter History Extract for DataConnect
  - C1-SPSYX - SP-Based Extract for DataConnect
  - C1SAFTCT - SAFT-PT Audit Extract Concentrator
  - C1SAFTPT - SAFT-PT Audit Extract

- C2M-EBIL - Email bill routing

- FAXROUT - Fax routing

- GLDL - GL download extract

- LTRPRT - Letter extract

- POSTROUT - Postal bill routing

- QUOTROUT - Quote routing

- STMDWLD - Download statements

Implementation-specific processes may also call and take advantage of the new Oracle Utilities Application Framework API.

Configuration Migration Assistant (CMA) Enhancements

Self-Contained Migration Plans and Migration Request for Installation Options

Self-contained migration plans have been provided for Installation Options and related objects. This enables all configuration data associated with Installation Options to be migrated from a source environment to target environment(s) in a single migration request.

Updating Administration Related Maintenance Objects with Default Migration Plan MO Option

All Administration related Maintenance Objects have been updated to include a Default Migration Plan MO option and the respective option value set to the Maintenance Object's Migration Plan. This will make the records for the updated Maintenance Objects to be eligible to be included in an Entity List migration request.

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

- Updated System Data Details From Prior Releases

Updated System Data Details

This section describes change made to the system data configuration:

- Field VAL (various tables) was changed from 18,7 to 19,8

- New columns were added to table CI_CC_TYPE:

  - CC_PER_FLG

  - CC_ACCT_FLG

  - CC_PREM_FLG

- ENTITY_REL_FLG
- Index C1T002S3 was added to table C1_NTF_PREF, field: CONTACT_ID, non-unique
- Index C1T002S4 was added to table C1_NTF_PREF, field: F1_SVC_TASK_ID, non-unique

The following algorithms without parameters were added:

Algorithm	Algorithm Type	Description
C1-CE-BRKPA	C1-CE-BRK-PA	Break Payment Arrangement
C1-CE-CR-FA	C1-CE-CR-FA	Create Field Activities - Cut For Non-Payment
C1-CE-EXPSA	C1-CE-EXP-SA	Expire SA
C1-CE-FACMPL	C1-CE-FACMPL	Check If Field Activities Are Complete
C1-CP-DWFA	C1-CP-DWFA	Deal With Field Activities
C1-CX-CPAIEC	C1-CX-CPAIE	Cancel Cut Process and its Events
C1-ICGETDIV	C1-ICGETACEL	Retrieve CIS Division
C1-LTEX-ODB	C1-OD-BILL	Create Overdue Event Letter Extract Records
C1-OE-AGYCAN	C1-OE-AGYCAN	Cancel Collection Agency Referral
C1-OE-AGYREF	C1-OE-AGYREF	Refer Open-Item Debt to Collection Agency
C1-OE-CR-CP	C1-OE-CR-CP	Initiate Cut Processes
C1-OE-TD	C1-OE-TD	Create To Do - Authorize Next Phase Of OD Process
C1-OE-TDCMPL	C1-OE-TDCMPL	Check If To Do Entry Is Complete
C1-OP-AGYCAN	C1-OP-AGYCAN	Cancel Collection Agency Referral
C1-ORD-GETCC	PKEL-ENRFLD	Retrieve order's customer class
C1-ORD-GETDV	PKEL-ENRFLD	Retrieve order's division
C1-PDOV-PYBL	C1-PDOV-PYBL	OI ONLY! Pay specific bill or latest bill
C1-PDOV-PYSA	C1-PDOV-PYSA	OI ONLY! Pay oldest SA/Bill balance first
C1-RP-UASUMM	RPTV-UASUMM	Validation for Umbrella Agreement Summary Report
C1-RPTV-DT	RPTV-DT	Validate Dates Overlap
C1-TUM-SARL	C1-TUM-SARL	Create Sub SA and SA Relationship For Next True Up Period
C1-WOCRTDFLT	WO CRIT DFLT	Default write-off criteria

Updated System Data Details From Prior Releases

The following table highlights system data changes that were done prior to the v2.6.0.1.0 release but were not listed in that version's *Release Notes* or *Database Administrator's Guide*.

Version	Change
2.6.0.0	• To Do Types ADM, C1-ADMOV and C1-ODET have been updated to associate them with their corresponding creation batch process. However, the field allows customization and will not be updated for upgrading customer. It is suggested that upgrading customers review these To Do Types and update them accordingly. Verify that the To Do Roles for these To Do Types are set according to your business rule. • Index XT285S1 in table C1_OFFCYC_BGEN_ADJ recreated to be non-unique. • FK Reference C1-COEVT - Info Program was updated to use the Java version: com.splwg.ccb.domain.creditcollections.common.CollectionEventInformation. • FK Reference C1-SVEVT - Info Program was updated to use the Java version: com.splwg.ccb.domain.creditcollections.common.SeveranceEventInformation.

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	• 24020_C1_BP_BpSchema1.sql - drops tables like 'C1_INITIATIVE_LEAD_CRIT%' • 24020_C1_BP_BpSchema2.SQL - modifies SRCH_CHAR_VAL to VARCHAR2(50) from CHAR	None	• 24020_C1_AP_apData1.sql - UPDATE CI_FK_REF SET INFO_PRG='com.splwg.base.domain.common.foreignKeyReference.GenericMOInfoRetriever' WHERE FK_REF_CD IN ('C1MRSCHD','C1POSTDF', 'C1- TOUB2', 'C1-BFVL2','C1DEGDAY', 'C1FLVL12','C1FLVL23', 'C1FSVCTL','C1HILOF2', 'C1-ITSQE', 'C1- CCORL', 'C1SATRLT') AND INFO_PRG='com.splwg.base.domain.common.foreignKeyReference.DescriptionRetriever' • 24020_C1_AP_APDATA2.SQL - UPDATE CI_FK_REF SET ZONE_CD = 'C1-FATYPEQ' WHERE FK_REF_CD = 'C1-FATYP' AND ZONE_CD = ' '

Release	Pre-Upgrade Scripts	Mid-Upgrade Scripts	Post-Upgrade Scripts
2.4.0.3	None	Please refer to the bug itself: • 24030_BUG_20878127.SQL • 24030_BUG_21165656.SQL • 24030_BUG_21165656_2.SQL	Please refer to the bug itself: • 24030_BUG_18906800.SQL • 24030_BUG_19162075.SQL • 24030_BUG_20023780.SQL • 24030_BUG_20426547.SQL • 24030_BUG_21078919.SQL • 24030_BUG_19707998.SQL
2.5.0.0	Please refer to the bug itself: • 25000_BUG_20778819_APPSVC_TO_CM.SQL	None	Please refer to the bug itself: • 25000_BUG_19884554.SQL • 25000_BUG_19360619.SQL • 25000_BUG_20029650.SQL • 25000_BUG_20301006.SQL
2.5.0.1	25010_C1_BP_BpSchema1.SQL - renames column CONTACT_ID TO C1_CONTACT_ID	None	Please refer to the bug itself: • 25010_BUG_21482753.SQL
2.5.0.2	Please refer to the bug itself: • 25020_BUG_22923270.SQL • 25020_BUG_23171347.SQL • 25020_BUG_23185566.SQL • 25020_BUG_23333064.SQL • 25020_BUG_23340914.SQL	None	Please refer to the bug itself: • 25020_BUG_22076980.SQL • 25020_BUG_23126046.SQL • 25020_BUG_23171347_2.SQL • 25020_BUG_23333266.SQL

Release	Pre-Upgrade Scripts	Mid-Upgrade Scripts	Post-Upgrade Scripts
2.6.0.0	Please refer to the bug itself: • 26000_BUG_23522817.SQL • 26000_BUG_25735907.sql	None	• 26000_BUG_24312969.SQL • 26000_BUG_25143834.SQL • 26000_BUG_25646627.SQL • 26000_BUG_25578850.SQL • 26000_BUG_25735862.sql • 26000_BUG_25138293.SQL • 26000_BUG_25839535.SQL • 26000_BUG_24922723.SQL
2601	Please refer to the bug itself: • 26010_BUG_26300765.SQL • 26010_CCB-2104.SQL	None	• 26010_CCB-2711.SQL • 26010_CCB-2915.SQL • 26010_CCB-2916.SQL • 26010_CCB-2921.SQL • 26010_CCB-2918.SQL • 26010_CCB-2917.SQL

Known Issues

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

This section includes:

- Known Issues in Oracle Utilities Customer Care and Billing
- Known Issues in Oracle Utilities Application Framework
- Bug Fixes Not Included in This Release

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
27055761	Characteristic types are not shown on the Bill Characteristics page.
27382468	To support Settlement, adds logic to check SA Relationship eligibility before synching SA Relationship in the SA Sync.
27354561	Calculated amount related to VAT rates is incorrect while using the calculation rule base rating engine.
27353829	In the Account Management Portal, Address Override is required when the Autopay source is updated.
27346987	Duplicate person contacts are added to the start/stop person contact collection.
27432982	The configurable letter print solution is being release as a patch.

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 system includes a new extendable lookup BO F1-FileStorage. However, the functionality associated with this business object is not fully implemented. It is planned to be fully delivered in the next release.

- The Generate button in the Generate Schema dashboard zone does not show the generated schema in the Schema Designer zone. However, the schema has been generated and is visible after Saving the record. The work around is to save the record after generating. This will be fixed in the next release.

- The application viewer is not currently supported using the Chrome browser.

Additional installation steps for OUAF 4.3.0.5.0 with WebLogic 12.2.1.3.0

In addition to the above known issues, one of the WebLogic jar file names was changed as of version 12.2.1.3.0.

- WebLogic versions prior to 12.2.1.3.0 uses the following file:

  ```
  org.codehaus.woodstox.woodstox-core-asl.jar
  ```

- As of WebLogic version 12.2.1.3.0, this file's name is:

  ```
  com.fasterxml.woodstox.woodstox-core.jar
  ```

Because the Oracle Utilities Application Framework applications need this file as an external jar, installing the originally named file with WLS 12.2.1.3.0 returns a "jar file not found" error (Bug 27609460). The problem has been fixed with Bug 27502978, but the Oracle Utilities Application Framework basic install stills returns an error.

Use the following procedure to successfully install Oracle Utilities Application Framework 4.3.0.5.0 with WLS 12.2.1.3.0:

1. Install OUAF 4.3.0.5.0 with WLS 12.2.1.3.0.

    Disregard the final initialSetup.sh error related to jar file not found.

2. Install OUAF Patch 27222125 using the following option:

    ```
    ksh ./installSF.sh -x
    ```

    The -x option skips the final initialSetup.sh phase and is required in order to complete successfully the installation.

3. Install OUAF Patch 27502978.

    Make sure the final initialSetup.sh completes successfully.

At this point the installation is completed and environment is ready for additional patch installation and/or the usual deploy/startup procedure.

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 tables below:

Original Bug	Original Version	Description	2.6.0.1.0 Post-Release
27118007	2.5.0.2	Copy person phone extension to person contact when person contacts are maintained from person phone.	27391016
26320594	2.5.0.2	Prevents setting up a non-billed budget when all the covered SAs are stopped.	26917583
26434423	2.4.0.3	Japanese Market: Enhancement to Demand Value to Price Calculation Rule to include the option to consolidate prorated charges.	26434442
26434297	2.4.0.3	Japanese Market: Enhancement to allow proration on discounts applied in certain billing scenarios.	26434310
26083050	2.4.0.1	Allows Bill Segment Freezing from Prepaid Biller when freeze at bill completion option is set.	26288384
26002627	2.4.0.3	Adds Activity ID as an additional key to prevent a duplicate key issue certain instances when sending activities to SOM.	26113456
25896444	2.4.0.3	Warns a user when removing a person address that is used on a related account's address source.	26020018

Deprecation Notices

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

- Deprecated Functionality in This Release
- Deprecated Functionality Planned For Future Releases

Deprecated Functionality in This Release

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

System Data Deprecation

The following configuration data is not used in any base processing and has been removed in this release.

Type of Object	Object ID	Comments
Algorithm	OVRPY-CREDOH	This algorithm was inadvertently release and has been removed.

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:

- COBOL Program CIPCPPHV (Phone format validation) - The logic in this program was replaced with FW-owned: ADHV-PHN.

- CIS Division Maintenance page was replaced with a new portal/zone.

  Cobol Programs and UI objects related to the old page will be deprecated: CIPTCIDP (CIS Division Page), CIPTCIDL (CIS Division List), CIPTCDCL (CIS Division Char List), CIPTDTRL (CIS Division TD Role List).

  Note: CIPTCIDR (CIS Division Row), CIPTCDCR (CIS Division Char Row), CIPTDTRR (CIS Division TD Role Row) are converted to use without any customer change.

- Control Central Search page was replaced with a new multi-query zone. Cobol Programs and UI objects related to the old page will be deprecated:

  - CIPCAPCS (Account Search By Person Contact), Copybooks CICCAIDC, CICCAPCH, CICCAPCS, Service: CILCAPCS.

  - Program CIPCAPCS, Service: CILCAPCS

  - UI Program: CIPCAPCSSD (accountSearchByPerContData)

- Pairs of batch controls exist for billing and many credit and collection processes. The newer of the pair was introduced to support multiple jurisdiction and utilizes the plug-in driven batch functionality. The original batch controls will be upgraded to the newer functionality, making the newer ones obsolete.

The following batch controls will be deprecated:

C1-BILL	C1-ADM	C1-CET	C1-CPM
C1-SET	C1-SEC	C1-SED	C1-WPM
C1-WET	C1-OAM		

Supported Integrations

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

Oracle Application Integrations

- CCB V2.6.0.1.0 to E-Business Suite (Revenue Accounting) V12.2.2+
- CCB V2.6.0.1.0 to PeopleSoft (Financials) V9.2
- CCB V2.6.0.1.0 to JD Edwards (Enterprise One) V9.1

Oracle Utilities Product Integrations

- CCB V2.6.0.1.0/Oracle Utilities Analytics V2.6.0
- CCB V2.6.0.1.0 to Oracle Utilities Meter Data Management V2.1.0.3+, V2.2.0.x
- CCB V2.6.0.1.0 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 v4.3.0.5.0 Release Notes

This section describes enhancements, system data details and deprecation notices in Oracle Utilities Application Framework version 4.3.0.5.0 including:

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

Introduction of Mobile Framework

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

This release of the Mobile Framework will support the following:

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

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

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

  - Geographical Map Services are not available in this release

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

  - GPS tracking is not available in this release

  - Deployment Formats are fixed in this release

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

System Wide Enhancements

Weblogic and Native Mandatory Upgrade

Special notes for upgrading from a Weblogic 12.1.3.x environment

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

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

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

- Shutdown the Application Server Environment.

- Take a full backup of the application $SPLEBASE

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

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

  - Execute: configureEnv.sh –i

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

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

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

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

Special notes for upgrading from a Weblogic Embedded installation

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

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

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

Removal of XML Application Integration and Multi-Purpose Listener

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

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

- MPL based configuration should be migrated to the provided Oracle Service Bus integration capability or an equivalent alternative (if Oracle Service Bus is not desired). Customer migrating to Oracle Service Bus should refer to the

Oracle Service Bus Integration whitepaper (Doc Id: 1558279.1) available from My Oracle Support.

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

Change in Multi-Language Support

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

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

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

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

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

Support for Chrome and Firefox

Mozilla Firefox Support

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

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

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

- the release will reach its end-of-life

- no further updates will be offered for that version

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

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

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

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

- Use a supported alternative browser until Mozilla resolves the issue

Chrome for Business Support

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

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

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

- Use IE or Firefox as a backup browser

- Wait for the next version of Chrome

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

Version Support

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

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

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

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

Ability to Minimize Dashboard when Launching the System

In this release a new URL parameter has been provided to minimize the dashboard while launching the system.

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

This parameter may be useful when the system is being launched with a script that navigates to a particular record and where the zones on the user's dashboard include a lot

of information by default. The user may want to suppress the dashboard for usability and performance reasons.

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

Consolidate User Logs for Clustered Environment

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

Configuration Tool Enhancements

The following sections highlight enhancements to the configuration tools functionality.

Groovy Scripting Improvements

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

Schema Designer Improvements

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

New Reusable Map Fragment / Data Area for Displaying PK Values

For portal based maintenance pages that display the main details of an object, the product standard for displaying primary keys is to show system generated keys in a Record Info section. In this release, the FW has created a map fragment to automatically display the primary key labels and values. In addition, a new Data Area (F1-InfoCommonWithPK) has been provided that includes the Record Info section definition, this new map fragment (F1-PkRecordInfo) and the existing map fragment F1-RecordInfoFusion that shows other common fields in the Record Info section such as Business Object, Create Date / Time, etc. BO schemas may include the new Data Area to get the standard Record Info details, including the primary key info.

Allow Status without BO on Monitor Batch Program

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

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

Display of BO Options Adjusted

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

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

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

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

Optimize Referencing OJET

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

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

Integration / Web Service Enhancements

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

Support for Base Delivered Outbound Message Types

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

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

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

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

Support for Web Service Categories

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

- Inbound Web Service

- Outbound Message Type

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

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

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

- F1-ADMINISTRATION - Administration

- F1-COMMUNICATION - Communication

- F1-IMPL-TOOLS - Implementation Tools

- F1-INTEGRATION - Integration

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

Support Custom Namespace

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

To enable this functionality:

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

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

Description Required on Inbound Web Service Objects

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

Support Oracle Web Services Manager for Outbound Messages

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

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

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

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

OWSM Protection for REST Services

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

Support for including the PK in Outbound Message Payload

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

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

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

Dynamic URL for Outbound Message

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

- ${pathParms}
- ${queryParms}

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

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

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

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

Ability to Add SOAP Header Parameters to Outbound Messages

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

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

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

File Access Enhancements

The following sections highlight enhancements related to accessing files.

Substitution Variable Automatically Added for SPLOUTPUT

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

Security Related Enhancements

Application Service Portal shows Secured Objects

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

Application Service Added to Service Program

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

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

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

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

Miscellaneous Enhancements

Change to Base ILM Eligibility Algorithm

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

If your implementation uses this base algorithm but does not wish to adopt the new behavior, you may add a new effective-dated parameter instance for this algorithm, with a

more recent date setting the value of the parameter to "N". Alternatively, you may create a new algorithm for the base algorithm type, set the parameter to "N" and plug this algorithm into the appropriate maintenance objects using a higher sequence number.

Initial Time Zone Delivered

In a previous release, Time Zone became a required field on the Installation Options record. However, at that time an intial value was not supplied when creating a new environment. Starting in this release, when creating an "initial installation" environment, a time zone of "UTC" is supplied and linked to the Installation Options record. Once an implementation creates the appropriate time zone record for their specific jurisdiction, the installation options record may be updated with the appropriate value.

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

Generic Owned Attachments Zone

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

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

Capture Attachment Extension

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

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

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

Migration Object Shows Primary Keys

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

Note: This was fixed in previous releases via a hot fix. It was fixed in 4.2.0.3.0 (Bug 23326349) and 4.3.0.4.0 (Bug 26288191).

Support Plug-in Driven Batch for Uploading Data

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

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

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

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

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

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

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

Enhance How Related To Do Entries are Determined

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

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

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

Oracle Utilities Application Framework System Data Details

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

New/Updated Application Services

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

The following applications are used by the Mobile Framework,.

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

Application Service	Description	Access Mode
F1-REMOTEMESSAGE	Remote Message MO	A, C, D, R
F1-REMOTEMSGSYNCDATA	Remote Message Synchronize Data	C, F1EX
F1REMSG	Mobile Remote Message Portal	R
F1REMSGQ	Mobile Remote Message Query Portal	R
F1-RMCRL	ILM Crawler - Remote Message	F1EX
F1-RMMSG	Remote Message Monitor	F1EX

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

Application Service	Description	Access Mode
F1OUMSTQ	Outbound Message Type Query Portal	R
F1OUMSTY	Outbound Message Type Portal	R

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

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

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

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

New/Updated Migration Plans

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

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

New/Updated Migration Requests

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

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

Oracle Utilities Application Framework Deprecation Notices

This section provides information on functionality that has been removed, is no longer supported by Oracle Utilities Application Framework V4.3.0.5.0, or is planned for removal.

Deprecated Functionality

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

YUI Library Support

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

Proxy Settings for HTTP Senders

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

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

Items Planned for Future Deprecation

The following items will be desupported in a future release.

Remove Customization Setting for Extended Data Area

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

Remove Ability to Add Child Rows for Several Maintenance Objects

There are several maintenance objects where base delivered entries are supplied by the product. In some use cases, implementations can extend the base functionality by adding child rows to the base delivered configuration. For example, implementations may add algorithms to a base delivered business object. However, there are some use cases where implementations are not able to extend base functionality by adding child rows. For example, implementations are not able to add additional algorithm type parameters to a

base delivered algorithm type. For most instances of such a restriction, there is validation preventing this in the user interface. However, there are several use cases where the validation is missing and will be added in a future release. Please make a note of it in case your implementation has added child rows in any of these maintenance objects. In the future, child rows that are not owned by the product will be removed.

- Algorithm Type - Parameters

- Application Service - Access Mode

- Maintenance Object - Table.

- Navigation Option - Context Fields.

- Script - Step Prompt

- Table - Field

- Table - Constraint / Field

- To Do Type - Sort Keys

- To Do Type - Drill Keys

- Zone Type - Parameters

Miscellaneous System Data

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

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

  - Business Object F1-EnvironmentRefPhysicalBO

  - Maintenance Object ENV REF

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

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

  - Algorithm Type / Algorithm F1-LDAPIMPRT

  - Algorithm Type / Algorithm F1-LDAPPREPR

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

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

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

Support for HTTP Proxy Functionality

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

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

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

CMA Migration Requests

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

CMA Import Algorithm

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

BO Read in F1-MainProc when Pre-Processing Exists

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

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

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

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