Oracle Utilities Smart Grid Gateway

Release Notes for:

> Service Order Management
> Adapter for Networked Energy Services
> Adapter for Itron OpenWay
> Adapter for Landis+Gyr
> Adapter for Sensus RNI
> Adapter for Silver Spring Networks
> MV90 Adapter for Itron
> Adapter Development Kit

Release 2.2.0 Service Pack 1

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Oracle Utilities Smart Grid Gateway Release Notes

Contents

Preface

These release notes describe enhancements and known issues for Oracle Utilities Smart Grid Gateway version Release 2.2.0 Service Pack 1.

Audience

Release Notes is intended for anyone installing or using the Oracle Utilities Smart Grid Gateway.

Related Documents

The following documentation is included with this release.

Installation Guides and Release Notes
- *Oracle Utilities Smart Grid Gateway Release Notes*
- *Oracle Utilities Smart Grid Gateway Quick Install Guide*
- *Oracle Utilities Smart Grid Gateway Installation Guide*
- *Oracle Utilities Smart Grid Gateway Database Administrator Guide*
- *Oracle Utilities Smart Grid Gateway Licensing Information User Manual*

Configuration and User Guides
- *Oracle Utilities Meter Data Management / Oracle Utilities Smart Grid Gateway V2.2.0 Service Pack 1 Business User Guide*
- *Oracle Utilities Meter Data Management / Oracle Utilities Smart Grid Gateway V2.2.0 Service Pack 1 Administrative User Guide*

Supplemental Documents
- *Oracle Utilities Smart Grid Gateway Server Administration Guide*
- *Oracle Utilities Smart Grid Gateway 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.

Release Notes

These release notes contain the following sections:

About This Release

This section contains general information about Oracle Utilities Smart Grid Gateway version 2.2.0.1.0. This release of Oracle Utilities Smart Grid Gateway includes the following components:

- Oracle Utilities Application Framework 4.3.0.4

- Oracle Utilities Service and Measurement Data Foundation 2.2.0.1.0

   Note: In previous releases, Oracle Utilities Service and Measurement Data Foundation was referred to as Oracle Utilities Meter Data Framework.

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

Relationship Between 2.2.0.1.0 and Prior Versions

Version 2.2.0.1.0 supports the following upgrade paths:

- If you are installing Oracle Utilities Smart Grid Gateway for the first time, you must install version 2.2.0.1.0, available on the Oracle Software Delivery Cloud.

- If you have Oracle Utilities Smart Grid Gateway version 2.1.0.3.0, you can upgrade to version 2.2.0.1.0 directly.

Supported Platforms Notice

Please refer to the *Oracle Utilities Smart Grid Gateway Quick Installation Guide* included in this release for an updated list of supported platforms.

Supported Head-End Systems

The following table lists the supported head-end systems and protocols for this release of the Oracle Utilities Smart Grid Gateway adapters:

Adapter	Currently Supported Version	Protocol
Adapter Development Kit	NA	MultiSpeak 4.1
Adapter for Networked Energy Services	Networked Energy Services NES 5.3	Proprietary (NES specific)
Adapter for Itron OpenWay	6.1	Proprietary
Adapter for Landis+Gyr	Gridstream Command Center 6.5	MultiSpeak v3.1
Adapter for Sensus RNI	Sensus RNI 3.3	MultiSpeak 3.0 & 4.1. RNI 3.1 and the SGG Sensus RNI adapter support MultiSpeak 4.1

Adapter	Currently Supported Version	Protocol
Adapter for Silver Spring Networks	UtilityIQ Versions 4.10	Proprietary
MV90 Adapter for Itron	.mv9 binary, mainframe data format	Binary file format

Database Changes

Refer to **Appendix F: Database Changes in Oracle Utilities Smart Grid Gateway** in the *Oracle Utilities Smart Grid Gateway DBA Guide* for details about database changes introduced in this release.

Supported Integrations

The following integration is supported in this version of Oracle Utilities Smart Grid Gateway.

Oracle Utilities Smart Grid Gateway Integration for Outage Operations

This integration is supported for the following versions of Oracle Utilities Network Management System:

- v2.3.0.x
- v1.12.0.x

Oracle Utilities Service Order Management Integrations

The following integrations used with Service Order Management are supported with this release:

- Oracle Utilities Customer Care and Billing 2.4.0.x and 2.5.0+ to Oracle Utilities Service Order Management 2.2.0.
- Oracle Utilities Service Order Management 2.2.0 to Oracle Utilities Mobile Workforce Management 2.2.0.x and 2.3.0+

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 service pack. Please refer to the *Database Administrator's Guide* for more information about installing the demo database, or contact Oracle Support.

Oracle Utilities Smart Grid Gateway Enhancements

This section describes new features and functionality in this release of Oracle Utilities Smart Grid Gateway, including:

- Endpoint URI Override Domain Value Map

Endpoint URI Override Domain Value Map

The Adapter Development Kit and the Landis+Gyr, NES, Sensus, Silver Spring Networks, and Itron OpenWay adapters have been enhanced to include a "Endpoint Override" Domain Value Map (DVM) that allows overriding Endpoint URIs defined during deployment and installation. The default approach to changing Endpoint URIs is redeployment or reinstallation or the BPEL composites. This DVM allows defining specific keys that provide an alternate URI that will override the original installed value. Endpoint Override DVMs can be edited using the Oracle SOA Composer.

Deprecated Items

This section describes items no longer supported by this version of Oracle Utilities Smart Grid Gateway:

- All Oracle 11g platforms
- Microsoft Internet Explorer 10
- Linux 5.8
- Solaris 10
- WebSphere
- Microsoft Server 2008 R2
- Microsoft Server 2012 for Production
- Java 6

Oracle Utilities Application Framework V4.3.0.4 Release Notes

This section describes enhancements, system data details and deprecation notices in Oracle Utilities Application Framework version 4.3.0.4 including:

- System Wide Enhancements
- Configuration Tool Enhancements
- Batch Processing Enhancements
- Integration Enhancements
- Configuration Migration Assistant (CMA) Enhancements
- Miscellaneous Enhancements
- Oracle Utilities Application Framework System Data Details
- Oracle Utilities Application Framework Deprecation Notices

System Wide Enhancements

This section provides information about enhancements that are system wide.

Introduce New Menu Item Search Facility

In this release, the toolbar has been enhanced to include a search option to **Search Menu**. If a user wants to access a menu entry found on the Menu or the Admin menu, but does not want to use the menu navigation to find the entry, this search option allows the user to search for the menu entry and navigate directly to that page or BPA script.

A shortcut key is also provided for accessing the search: **Ctrl+Alt+F**.

Introduce Shortcut Key for Bookmark Button

The shortcut key **Ctrl+Alt+B** has been enabled to access the Bookmark button.

Minimizing the Dashboard Suppresses Refresh of Zones

In previous releases, when a user minimized the dashboard, dashboard zones would continue to refresh when the user performed any action that would trigger a refresh. This impacted system performance if there were many zones on the dashboard, users would need to wait for the zones to refresh even though the data was not visible.

In this release, the behavior has been changed to suppress the refresh of the content of the zones in the dashboard while the dashboard is minimized. Changes in the context values that drive the dashboard content are retained while the dashboard is minimized. When the user maximizes the dashboard, at that point all the zones are refreshed per existing behavior.

> **Note:** This behavior change means that opening a minimized dashboard will be slower than in previous releases because the refresh occurs at that point. However, users should see improved response if navigating the system with the dashboard minimized.

Support Ability to Bypass the Home Page when Launching the Application

The system supports launching the system with additional configuration in the URL to automatically navigate to a page or launch a BPA script (or both). When a page is provided (using the 'location' attribute in the URL), the system navigates the user to that page. If a BPA script is also provided, the BPA script is executed after navigation. If a BPA script is supplied with no 'location' attribute, the system navigates to the home page prior to executing the script.

There are use cases where the application should be launched with a script that has logic to determine the appropriate target page. For example, the base script **F1-GotoPrtl** (Navigate to portal for an MO and key values) expects an MO code and primary keys to be supplied. Its logic determines the appropriate portal for this record and then navigates to that record. In this scenario, the system navigates to the user's home page prior to executing the script, which slows down the launching. It is especially problematic for users whose home page loads a lot of information by default.

In this release a new attribute has been provided to skip the navigation to the home page: **initNav=false**.

The following is an example of a URL with this setting:

```
<system-url>/cis.jsp?script=F1-GotoPrtl&mo=F1-
MIGRPLAN&pkValue1=F1-AlgorithmType&initNav=false
```

Support URI Validation and Substitution

The following sections highlight enhancements related to defining a URI (URL, File Path, File URL).

Restrict URI Reference Based on a Property Setting

In this release, the product has introduced the ability to define a whitelist of URI references in the product. A setting in the properties file is used to indicate whether URI references should be validated against the whitelist. The definition of the whitelist is done in a file called **whiteList.xml**.

> **Note:** Refer to the *System Administration Guide* for more information.
> Note that this was also implemented as a hot fix to 4.3.0.3.0.

Implementation of this functionality requires the code to identify the fields that are capturing a URI value and invoke an API to perform this validation both when configuring a field that captures this type of data and at runtime when using the URI. A new extended data type of URI has been added for the metadata Field and for the schema element syntax. For records that are business object (BO) driven, the validation of a URI element is automatically provided as long as the element is configured with a URI data type either directly or through its Field definition. However, records capturing URI that are not BO driven must include explicit code to call this new API. In all cases the code that uses the URI must be enhanced to invoke this API.

Support the Use of Substitution Variables

In this release, the system provides support to allow fields that capture URIs to referencing a substitution variable for all or part of the URI definition. This allows the system administrators to define the proper URI locations in a properties file whereas the configuration users only need to know the variable name. The name of the XML file that holds the substitution variables is defined as a property setting. The system provides a template to generate a file with the name **substitutionVariableList.xml**. To define a

URI substitution, define the name of the parameter and the value. The name may then be used as the variable name surrounded by the symbol @ in configuration.

For example: When defining a location for an extract file in an extract batch job, instead of typing a file path of **h:\oracle\serverName\1.0.0.0\batch\extract**, the batch user can enter @FILE_EXTRACT@, assuming there is an entry in the substitution variables file with a name of **FILE_EXTRACT**, and a value of **h:\oracle\serverName\1.0.0.0\batch\extract**. Another example is that the batch user could enter @BATCH_FILES@\extract\, assuming that the URI variable for **BATCH_FILES** is defined as **h:\oracle\serverName\1.0.0.0\batch**.

Each entry may also indicate whether child components may be added after the parameter name. If the configuration says that it's not allowed, the second example above, for example (@BATCH_FILES@\extract\) would not be allowed. The default is that child components are allowed.

The product supplies a pre-defined variable name for the location of the CMA files as described in Allow Master Configuration to be Optional. In addition, the 'advanced' menu in the system installation steps may prompt for installers to adjust the value of this pre-defined variable, if desired. Installations may opt to define additional substitution variables for various URI references. Refer to URI Substitution Variables in the planned deprecation section regarding product delivered variables that will be deprecated in a future release.

> **Note**: Refer to the *System Administration Guide* for more information. Note that this was also implemented as a hot fix to Oracle Utilities Application Framework 4.3.0.3.0.

Implementation of this functionality is covered by the API that is mentioned in the Restrict URI Reference Based on a Property Setting section.

Adjust Zones that Support Drag and Drop

In a previous release, zones that support the configurable column logic (also referred to as "drag and drop") were enhanced to display a trash can image in the column heading. This was meant to support a quick click to remove the column, if desired. Columns were also removable by opening the configuration area, finding the column name and clicking the trash can adjacent to the column name.

In this release the trash can has been removed from the column header. Removing the column continues to be supported using the configuration area.

Limit Height for Large Explorer Columns with a Width Setting

By default, the column width for results in a data explorer zone expands to fit the data. This may be overridden at the column level by configuring a width, which ensures that columns with a large amount of data do not cause a large horizontal scroll. Instead, the data wraps, expanding the output vertically.

In this release a change has been made to columns that include a 'width' configuration to limit the height to about 8 rows of text. If more than 8 rows exist, a scroll bar for that cell is included. This reduces the amount of unnecessary vertical scrolling for the entire set of data.

Configuration Tool Enhancements

This section provides information about enhancements to the system configuration tools.

UI Hint Sections May Be Configured to 'Float'

In previous releases, a section on the display map rendered in UI hints could be configure as half width, using the values of **left** or **right**. These positions are fixed and for pages where some sections may be hidden under certain conditions. This could produce odd results, such as several left sections shown but no right sections.

In the release a new option has been added to the **sectionColumn** UI hint: **float**. Sections with this configuration will render on either the left or the right side of the display based on available space. (This is available on **group** and **list** nodes as well).

UI Hint Sections May Be Half Width on Maintenance

In previous releases, a section could be designated as full width or half width (indicating left or right) for a Display map, but not for a Maintenance map. The sections on a Maintenance map were always full width. In this release, a new UI Hint has been provided to allow for a section to be half width for maintenance rendering: **editColumn**. It supports values of **full** (the default), **left**, **right** and **float**. (This is available on **group** and **list** nodes as well).

Enhance Groovy Scripting Capabilities

This section provides details about enhancements to Groovy scripting functionality.

Groovy Library Scripts

In this release, the system has introduced support for creating libraries of common routines and methods written in the Apache Groovy programming language that may be invoked from other scripts.

The following points highlight more information about this enhancement:

- A new script type of **Groovy Library Script** has been added which provides a basis for creating groups of common methods. Scripts of this type must include only Groovy-based step types. The methods defined can accept arguments and return values of any type.
- A **Groovy Library Script** must include a new step type of **Groovy Library Interface** which lists the publicly available methods defined within the script.
- The system provides a new public method called **createLibraryScript** which is used to instantiate the interface for a Groovy library and enable other **Groovy Members** step types within the script to invoke any of the library methods.

Note that this functionality is only available to server based scripts which are able to configure **Groovy Members** steps. Refer to *The Big Picture of Server Based Scripts* topic in the *Defining Script Options* chapter of the *Administrative User Guide* for an overview of server scripts.

Ability to Launch Groovy JavaDocs

For system protection, only a subset of system Java classes is accessible to Groovy code. In this release, a Groovy-specific Java Docs viewer is provided to allow users to view only the allowed classes. The viewer may be launched via a new **Groovy JavaDocs** button on the Application Viewer toolbar and also via a link in the context sensitive "Script Tips" dashboard zone.

Ability to View Third Party Whitelist

The system restricts the third party Groovy classes that are accessible from within scripts for the same reasons as it restricts the system Java classes. In this release, the "Script Tips" dashboard zone now includes a link that displays the list of accessible (or "whitelisted") classes.

Restrict SQL Functions Based on a Property Setting

In this release, a property setting has been provided to restrict the functions that may be used when defining an SQL either through a data explorer zone, through a Groovy script or through the Select Records plug-in algorithm for the plug-in driven batch programs. If the setting is enabled, then an error is issued at runtime if there are functions found that are not in the whitelist. The whitelist is documented in the managed content **F1-SQLFunctionWhiteList** (Whitelist of SQL functions). A link to view this whitelist is available in the Tips zone on the zone maintenance page.

Batch Processing Enhancements

This section provides information about batch processing enhancements.

Individual Security Added to Batch Control

In previous releases, an implementation was able to secure which users were able to submit a batch job (i.e. to create a Batch Job Submission entry) and which users were not. However, there was no ability to define more granular controls at the batch control level. In this release, application service has been added to the Batch Control, allowing an implementation to control which users are able to submit which batch controls. The user's security for a batch control's application service is checked when a batch job submission record referencing that batch control is created.

For base delivered batch controls, individual application services have been supplied for each batch control. Refer to the New/Updated Application Services section for a list of affected services.

Note the following for upgrade purposes:

- All user groups that currently have Add security access to the Batch Job Submission application service are granted access to all application services for all batch controls.
- Custom batch controls are updated with the F1-DFLTAPS application service. If implementations wish to provide more granular security for their custom batch

controls, they should determine or create an appropriate application service and update the appropriate batch controls.

Additional Support for Ad-hoc Batch Parameters

In this release several enhancements have been included to provide access to ad-hoc batch parameters for various batch related plug-in spots.

Plug-in Driven Batch Programs Support Adhoc Parameters

In this release, the two plug-in driven batch programs provided in the product have been enhanced to allow for ad-hoc parameters to be defined for a given batch control. These parameters are provided to the Select Records algorithm and Process Record algorithm, allowing the algorithms to use this information for processing. Note that the two "template" batch controls provided for these (**F1-PDBG** - Plug-in Driven Generic Template and **F1-PDBEX** - Plug-in Driven Extract Template) have been updated to use higher sequence numbers for the standard "system" parameters and for the extract related parameters. This allows for implementations to enter specific parameters (that are probably more business oriented) to have lower sequence numbers and therefore appear first.

For any adhoc parameters that you wish to use as bind variables for the SQL used to select the records for a plug-in driven batch, your select records plug-in may be used to identify the relevant batch parameter passed as input and populate the output bind variable appropriately. Refer to the Select Records Plug-in Enhanced to Support Field Name for Bind Variables section for information about defining a field name when returning custom bind variables for the Select Records plug-in spot.

Additional Parameters Added to Several Batch Plug-in Spots

In this release, several batch control related plug-in spots have been updated to support additional hard parameters.

- Select Records includes the batch control parameters (defined in the parameter collection on the batch control page) as name/value pairs along with the batch code, run number, number of threads and batch business date.

- Process Records includes the batch control parameters (defined in the parameter collection on the batch control page) as name/value pairs along with the number of threads. (This plug-in spot already receives batch code, run number and batch business date.)

- Post-Processing includes the batch control parameters (defined in the parameter collection on the batch control page) as name/value pairs along with the number of threads and the batch business date. (This plug-in spot already receives batch code, and run number.)

Select Records Plug-in Enhanced to Support Field Name for Bind Variables

In a previous release, the Select Records plug-in was introduced to support plug-in driven batch jobs. Algorithms for this plug-in spot define the SQL as the first parameter and in addition, the algorithm can return name/value pairs for defining custom bind variables for the SQL. In this release, the collection of bind variables now includes the appropriate field name (from the CI_MD_FLD table) that provides information about the data type and length. This information is important for the SQL binding logic to properly substitute the values using an appropriate length. Otherwise, the SQL may require 'rtrim' to be included to find the data, which may cause performance issues.

If your implementation has created any custom Select Records plug-in that return specific bind variables as name/value pairs, it is highly recommended that you consider updating the algorithm to provide a field name as well.

Introduce Error Post-Processing Plug-in Spot

In a previous release, a Post-processing system event (plug-in spot) was introduced to support performing a task after all threads for a successful batch job are complete. In this release, a new system event (plug-in spot) has been provided for batch jobs that do not complete successfully. The system event, called **Error Post-Processing**, allows an implementation to configure an algorithm that automatically performs a task when a batch process fails.

Support for Maintaining/ Administering the Oracle Scheduler

In this release, several business services have been included to allow implementations to dynamically maintain, monitor and execute application batch processes that are managed by Oracle Scheduler. These are just APIs (we are NOT delivering user interfaces). The business services are also exposed as REST API based services for integration with a management console, such as Oracle Enterprise Manager.

Refer to the *Server Administration Guide* for more information.

Batch Run Tree - Change Label of Last Update Date

On Batch Run Tree, the last update date/time for the most recent batch run is displayed at the top of the page along with the Batch Control and Run information. The label had been Date Time, which is confusing because it may lead a user to associate this date and time with the current run being viewed. To be more explicit, the label has been changed to **Last Update Timestamp**.

Integration Enhancements

This section provides information about integration oriented enhancements.

Support for Multiple Security Policies

In this release, the system has added support for defining multiple security policies for an inbound web service (IWS).

The following points highlight the changes that were included:

- A sequence has been added to the Inbound Web Service/Annotation list. This allows an implementation to indicate the appropriate order for execution of the annotation policies.
- The base annotation type **F1POLICY** has been updated to include a parent annotation type (**F1POLICIES**). The parent annotation type is used at runtime when multiple annotations are found to properly build the array of annotations.

Support OWSM Security Policies

In this release annotation types have been provide to allow Inbound Web Services to be protected by OWSM security policies. The base product supplies a new annotation type **F1-OWSM** - Annotation for OWSM Security Policy along with a parent annotation type **F1-OWSMS** - Parent for OWSM Policy.

Enhanced the WS-Policy Annotation Type to Allow Direction Override

In this release, the **F1POLICY** annotation type (Annotation for Standard WS-Policy) has been enhanced to expose the 'direction' parameter so that implementations may override the default value, if desired.

Support Password Encryption for Service Catalogue Configuration

The master configuration record Service Catalogue Configuration (**F1-ServiceCatalogConfig**) allows for an implementation to configure one or more subordinate servers along with authentication details (user/password). In this release support has been added to allow the password to be encrypted using the standard system support for encryption. Additional configuration is needed to define the **Encryption** feature configuration to fully support this functionality. Refer to the online help for service configuration for more details.

Configuration Migration Assistant (CMA) Enhancements

The following sections highlight enhancements to CMA functionality.

Allow Master Configuration to be Optional

In this release, the product has been enhanced to provide default values for the information configured on the Migration Configuration Assistant master configuration record. This allows an implementation to reduce the number of steps when provisioning a new environment that uses CMA to import new records.

The change relies on default export and import directories to be defined using the Substitution Variables, with the variable name **@F1_CMA_FILES@**. The system will default the export directory **@F1_CMA_FILES@\export**. The system will default the import directory to **@F1_CMA_FILES@\import**.

The file suffix is now defaulted to "cma" if not configured on the master configuration. This has been the recommended value.

Refer to the Support the Use of Substitution Variables enhancement for more information.

Enhance Migration Requests to Facilitate Migration Requirements

This release includes several enhancements to the migration request to support common requirements for defining records to migrate. To support the enhancements, two new fields have been added to Migration Request to allow categorization/classification of the migration request records.

- Migration Request Class - this is an internal field that is used to support the new business objects that are described in subsequent sections below.

- Migration Request Category - this is an extendable lookup field and is provided to allow for the product or an implementation to categorize the migration request to aid in searching. The product provides one value as base: **Accelerator**. This may be used for migration requests that are defined to include data that is part of an accelerator. Records may be configured to indicate that a reference ID is required. However, this only applies to Entity List migration requests.

These fields have been added as search criteria to the migration request search zone.

Introduce a Migration Request BO Specific to a List of Entities

A common use case for migration of data is to copy a specific list of records (entities) that are associated with a particular enhancement or 'sprint' or release. Rather than using selection criteria for a migration request instructions (which are useful for a "bulk" migration), users often prefer to explicitly list records. The Migration Request business object provided in a previous release allows a user to define specific keys. However, the user interface is not very friendly.

In this release enhancements have been provided to facilitate defining a migration request with an explicit list of records. The following points highlight what is provided for this functionality.

- A new migration request business object has been provided: Entity List Migration Request (**F1-EntityListMigrationRequest**). It is similar to the business object provided in a previous release (F1-MigrReq). However, its user interface only supports defining records explicitly. In addition, its user interface uses Maintenance Object rather than Migration Plan as the driver. The migration plan to use for the instructions is derived using an option on the maintenance object. Records created with this business object are assigned the migration request Class value of **Entity List**.

- A special zone has been provided for the migration request portal for **Entity List** migration requests to add records to the request. This zone is dynamic. The user chooses a maintenance object and other filter criteria to get a list of objects. One or more objects may be selected for inclusion into the migration request. The user may provide a reference ID to associate with the records along with comments.

- A special zone has been provided for the migration request portal for **Entity List** migration requests to view and remove records linked to the request.

As part of this enhancement, the F1-MigReq business object has been enhanced as follows:

- The description has been changed to **Criteria-based Migration Request**. This migration request is still useful for migration requests that select records based on selection criteria or selection algorithms or specific keys or a combination of any of the three.

- Records created with this business object are assigned the migration request Class value of **Criteria-based**.

Note that this business object has not been enhanced to allow for a reference ID or comments.

Introduce the Ability to Group Migration Requests

In this release, Migration Request has been enhanced to support referencing one or more other migration requests. This allows for a product or an implementation to define separate migration requests that represent logical groupings of migration plan instructions for ease of maintenance, but to combine all the separate migration requests into a single "grouped" migration request for streamlined export/import purposes. Multiple levels of grouping are supported. In other words, one migration request may reference multiple migration requests, which in turn are grouping other migration requests.

The following enhancements are included to support this functionality:

- A new migration request business object has been provided: Group Migration Request (**F1-MigrationRequestGroup**). Records created with this business object are assigned the migration request Class value of Group. The product does not supply any business object that supports defining a combination of migration plan instructions and migration request references.

- The migration request search includes a new option to search by a referenced migration request.

- The migration request maintenance portal now includes a zone that appears if the migration request being maintained is referenced in a separate migration request. This zone lists the migration requests that reference this one.

In addition, the Framework product delivers a new Group migration request called Framework Configuration (F1-FrameworkConfig) to aid in wholesale migrations. This migration request groups other framework delivered migration requests. Some of these migration requests are also new to this release.

- General System Options (**F1-GeneralSystemOptions**) - This is an existing migration request. It includes most of the administration tables in framework that are considered more business oriented (rather than system configuration oriented). Refer to New/Updated Migration Plans/Migration Requests for details of changes to this migration request.

- Framework Integration Configuration (**F1-IntegrationConfig**) - This is a new migration request. It includes all the configuration tables that are used to define integrations with other systems. Refer to the migration request for more information.

- Migration Admin (**F1-MigrationAdmin**) - This is an existing migration request. It includes the CMA configuration records (migration plan and migration request).

- Security Configuration (Without Users) (**F1-SecurityConfigWithoutUsers**) - This is a new migration request. It includes all the security configuration tables, but does not include the user configuration. Refer to the migration request for more information.

- Framework System Configuration (**F1-SystemConfig**) - This is a new migration request. It includes all the configuration tables that are considered "system" data or "configuration tools" data. Refer to the migration request for more information.

Edge products and/or implementations may choose to include the **F1-FrameworkConfig** migration request into another grouping migration request so that framework objects are included in a migration without having to explicitly list them. This ensures that in the future, when new framework administration tables are introduced and included in one of the migration requests referred by **F1-FrameworkConfig**, no additional configuration is needed by edge products or implementations to start migrating that data.

Provide the Ability to Mark Multiple Objects as Approved, Rejected or Needs Review

In this release, the following zones have been enhanced to allow for updating multiple objects to Approved, Rejected or Needs Review:

- On the **Migration Data Set Import** portal, the **Migration Data Set Impacted Object Summary** zone now includes the multi-select actions of Approve, Reject and Needs Review.

- On the **Migration Transaction** portal, the **Migration Transaction Objects** zone now includes the multi-select actions of Approve, Reject and Needs Review.

In addition, the **Migration Data Set Objects in Error** zone on **Migration Data Set Import** provides the ability to Reject one or more records.

Provide More Detail for a Completed Migration Data Set Import

In a previous release, when a Migration Data Set Import has finished all its tasks, its status was set to Applied, even if some of the migration objects were in a status of **Cannot Apply**. In this release some enhancements have been done to provide more information for a user reviewing the results of an import:

- The description of the final status (APPLIED) has been changed from Applied to Completed.

- The Completed status is configured to support an optional Status Reason. The product supplies two base Status Reason values for this BO for the Completed state:

  - F1-NO-OBJ-APPL - No Objects Applied

  - F1-SOME-NOT-APPL - Some Objects Not Applied

- The algorithm that transitions a Migration Data Set Import record to the Completed status will review the status of the related migration objects and populate the status reason, if applicable. If all objects are in the Cannot Apply state, it populates a Status Reason of 'No Objects Applied'. If some objects are in

the Cannot Apply state, it populates the Status Reason of 'Some Objects Not Applied'. If no objects are in this state then the status reason is not populated.

- The display of a Migration Data Set Import record now includes the counts of Applied Objects and the number of objects in the Cannot Apply state.

   Note: This functionality was made available in 4.2.0.3.0 as a hot fix using bug 23228369.

Enhance the Information for Migration Data Set Import

Previously, the Migration Data Set Import information string only showed the ID of the data set. In this release, the information string has been enhanced to include the Export description, the Status description, the status reason description (if populated) and the creation date and time.

   Note: This functionality was made available in 4.2.0.3.0 as a hot fix using bug 23228369.

Enhance the Migration Data Set Import Query Results

In this release the results of the migration data set queries have been adjusted.

- The separate columns for migration data set id, status and export description have been consolidated into one column showing the migration data set import information string (that now includes all these fields). This column has been enabled to include the worklist capability.

- The Status Date/Time and Export Date/Time columns have been removed.

- New columns have been added showing various counts: number of Applied objects, number of objects in the Cannot Apply state and the number of objects that are Unprocessed (still in a non-final/non-rejected state).

Enhance the Migration Data Set Detail Zones

In this release the zones on the Migration Data Set Import portal that show the Transactions and the Objects linked to the data set have each been enhanced to only show records in a non-final state by default. The existing user filter for Status has been enhanced to include an entry for limiting to non-final states as well as an entry to show records in all status values. This allows a user to choose to limit the search to records in a given state, or all states or to return to the default option of only non-final states.

Support for Migrating Individual Lookup Values

In previous releases, the system supported migrating a Lookup and all its values. In this release, support is provided to migrate individual lookup values. To support this, a new Lookup Value MO has been provided. Along with that a migration plan to migrate specific lookup values has been provided. Note that this migration plan has not been included in any base migration requests as they are meant for "wholesale" migrations whereas this new migration plan is expected to be used for migrations that target an explicit list of records.

Miscellaneous Enhancements

This section describes miscellaneous enhancements.

Introduce New Business Service to Interrogate Warnings

The way the system handles warnings to an online user is that warnings are accumulated and issued altogether and the end of all the processing. All the updates are rolled back at this point. If the user Cancels, no further processing is needed. If the user clicks OK, all the processing is re-executed and all warnings are ignored.

For programs that perform logic that cannot be rolled back (such as sending a real-time message to an external system), ideally the logic should check to see if warnings are being accumulated and only perform the logic if warnings have not been accumulated. i.e., the logic should only occur once the user has clicked **OK**.

An API in Java exists for programs to check this condition. In this release a new business service has been provided to expose this information. The business service is **F1-CheckWarning**.

> **Note:** Processing that cannot be rolled back should be the last possible step in a logical transaction because there is no way to know if a warning may be issued after the logic is performed.

Changes to Batch and User Logging

In this release, the system has been enhanced to limit the information that is captured in the logs that are visible by a user to suppress the information that is proprietary to the system. In addition, information that is captured in a more technical log that is reviewed by a system administrator suppresses customer data such as bind variables.

Refer to the *Server Administration Guide* for details of the formats.

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.

Application Service	Description	Access Mode
The following services were added for the Individual Security Added to Batch Control enhancement.		
F1-ARQPR	Request Monitor	E
F1-AVALG	Application Viewer - Extract Algorithms	E

Application Service	Description	Access Mode
The following services were added for the Individual Security Added to Batch Control enhancement.		
F1-AVBT	Application Viewer - Extract Batch Control	E
F1-AVMO	Application Viewer - Extract MOs	E
F1-AVTBL	Application Viewer - Extract Table data	E
F1-AVTD	Application Viewer - Extract To Do Types	E
F1-BFCRL	ILM Crawler - Business Flag	E
F1-BSFLG	Business Flag Monitor	E
F1-BUNPR	Bundle Monitor	E
F1-DTDOM	Outbound Message Error To Do Entry Cleanup	E
F1-FCTRN	Fact Monitor	E
F1-FKVBP	Foreign Key Validator	E
F1-FLUSH	Flush All Caches	E
F1-ILMIN	ILM Crawler Initiator	E
F1-LANG	New Language	E
F1-LDAP	LDAP Import	E
F1-LKPIL	Standard Lookup Initial Load	E
F1-MGDIM	Migration Data Set Import Monitor	E
F1-MGDPR	Migration Data Set Export Monitor	E
F1-MGOAP	Migration Object Monitor - Apply	E
F1-MGOPR	Migration Object Monitor	E
F1-MGTAP	Migration Transaction Monitor - Apply	E
F1-MGTPR	Migration Transaction Monitor (Deferred)	E
F1-NDPUR	Notification Download Purge	E
F1-ORCRL	ILM Crawler - Object Revision	E
F1-OUCRL	ILM Crawler - Outbound Message	E
F1-PDBEX	Plug-in Driven Extract Template	E
F1-PDBG	Plug-in Driven Generic Template	E
F1-REQTY	Request Type Monitor	E
F1-REVPR	Object Revision Monitor	E
F1-SAKRQ	Sync Request Allocate Keys Monitor	E
F1-SICRL	ILM Crawler - Inbound Sync Request	E

Application Service	Description	Access Mode

The following services were added for the Individual Security Added to Batch Control enhancement.

Application Service	Description	Access Mode
F1-SRCRL	ILM Crawler - Sync Request	E
F1-SRLRQ	Sync Request Load Records Monitor	E
F1-STATSM	Statistics Control Monitor	E
F1-STCRL	ILM Crawler - Service Task	E
F1-STKDF	Service Task Monitor (Deferred)	E
F1-STKTR	Service Task Monitor	E
F1-SUBRQ	Request Monitor (Deferred)	E
F1-SYNEF	Sync Request Extract	E
F1-SYNIL	Sync Request Initial Load	E
F1-SYNRQ	Sync Request Monitor	E
F1-SYSRQ	Sync Request Monitor (Deferred)	E
F1-TDCRL	ILM Crawler - To Do Entry	E
F1-TDEER	To Do Entry External Routing	E
F1-TDPG	Purge Completed To Do Entries	E
F1-XMLPG	XAI Upload Staging Records Cleanup	E

Application Service	Description	Access Mode	Comments
F1-RETRCMASETTINGSSC	Retrieve CMA Configuration BS	E	Added for a new business service that may be used to retrieve CMA master settings.
F1NAVEMP	Launching Application	E	Special portal for Support Ability to Bypass the Home Page when Launching the Application.

New/Updated Migration Plans/Migration Requests

Migration plans have been added for the following maintenance objects in this release:

- ETL Mapping Control (F1-ETLMappingControl)
- Installation Options (F1-InstallationOptions).

    Note that in a previous release, the product supported installation algorithms only. This migration plan allows for copying of main fields on installation, the algorithm collection and the messages collection. In addition, this migration plan

includes a pre-compare algorithm that retains the value of the Environment ID and the License Key for the target installation record.

- Lookup Value (F1-LookupValue). This is for the functionality described in the Support for Migrating Individual Lookup Values section.

- Performance Target Type (F1-PerformanceTargetType)

- Performance Target (F1-PerformanceTarget)

- Statistics Control (F1-StatisticsControl)

- User Group - without users (F1-UserGroupWithoutUsers).

  In previous releases we had supplied a migration plan for User Groups that includes all collections for the user group. This migration plan allows an implementation to move a user group and its application service configuration without copying users (that may not be valid in the target region).

- Message Options (F1-MessageOption)

- JMS Queue (F1-JMS-Queue)

- JMS Topic (F1-JMS-Topic)

- JNDI Server (F1-JNDI-Server)

The following changes were made to the General System Options migration request (F1-GeneralSystemOptions).

- Migration plans for the following MOs were added:

  - Attachment

  - Bucket Configuration

  - Characteristic Type

  - ETL Mapping Control

  - Extendable Lookup

  - Installation Options

  - Managed Content

  - Performance Target

  - Performance Target Type

  - Report Definition

  - Request Type

  - Service Task Type

  - Statistics Control

  - To Do Type

- Migration plans for the following MOs were removed:

  - Installation Algorithms

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 V4.3.0.4, or is planned for removal.

Deprecated Functionality

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

Support for Abbreviated Time Zone Names

The time zone page includes a drop down for defining a Time Zone Name. In previous releases, the list includes many three-digit "abbreviated" time zone names. However, their use is deprecated because the same abbreviation is often used for multiple time zones (for example, "CST" could be U.S. "Central Standard Time" and "China Standard Time"), and the Java platform can then only recognize one of them.

In this release, the Time Zone name drop down no longer includes the abbreviated values.

> **Upgrade Note** - Please review your time zone records and set the Time Zone name to an appropriate valid value.

Items Planned for Future Deprecation

The following items will be desupported in a future release.

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 tables F1_IWS_SVC_OPER_L, F1_IWS_ANN_CHAR and F1_IWS_ANN_TYPE_CHAR will be removed in a future release.

URI Substitution Variables

In a previous release several variables were provided out of the box however, no product functionality was using them. In a future release these variables will no longer be delivered as it was deemed confusing to supply variables that were not related to specific product functionality. The following variables will no longer be delivered:

- F1_BI_EXTRACTS
- F1_INTERNAL_FILES
- F1_CUST_APP_BASE
- F1_PROCESS_DIR
- F1_SVC_CATALOG_WSDL_DIR
- F1_PDB_EXTRACTS

The suggestion for implementations is to not use any of the above names. CM variable names should be used instead.

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.

Desupport of Embedded Installation

WebLogic 12.1.3 is currently supported for both embedded and native installations. In future releases of Oracle Utilities Application Framework, using a later version of WebLogic, for example 12.2.*, embedded installations will be not be supported. Only the native installation will be supported.

Removal of YUI Library Support

Due to the discontinued support of the open-sourced Yahoo! User Interface Library (YUI), all YUI components will be removed from the product in a future release. The recommendations for implementations is to review custom use of YUI library resources and plan to replace the resources accordingly.

Known Issues in This Release

This section describes known issues in Oracle Utilities Smart Grid Gateway version 2.2.0.1.0 at the time of release. Single fixes for these issues will be released at a later date.

Oracle Utilities Application Framework

Bug Number	Description
25898377	Java script error. **Note**: It is highly recommended that the single fix for this issue be installed as soon as the MDM environment has been installed. This bug fixes user interface errors that may occur during application viewing.

Adapter Development Kit

Bug Number	Description
25885363	ADK SMART METER MAINT. UI: 'HEAD-END SYSTEM' DROP-DOWN LIST IS NOT POPULATED