

Oracle Utilities Operational Device Management

Configuration Guide

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Contents

Chapter 1

Overview.....	1-1
Using the Configuration Guide	1-1
Other Documentation	1-1
User Documentation.....	1-1
Administrative Guides	1-2
Oracle Utilities Application Framework User Guides.....	1-2
Supplemental Documentation	1-2
Application Overview	1-2
Oracle Utilities Application Framework Configuration Tools	1-2
Demonstration Examples.....	1-4
Configuration Process Overview	1-4
Design Business Objects	1-4
Create Business Objects	1-4
Create Portals and Zones (as needed)	1-5
Configure General System Settings.....	1-5
Create Data	1-5

Chapter 2

Data Configuration	2-1
Setup Sequence	2-1
Administration Data Setup	2-2
Business Object Setup	2-2
Application Framework Setup.....	2-3
Administrative Data Setup	2-4
Master Data Setup	2-4

Chapter 3

System Objects in Detail.....	3-1
Oracle Utilities Application Framework Objects	3-1
Feature Configuration.....	3-1
Installation Options.....	3-1
Master Configuration	3-3
Status Reason	3-3
Time Zone	3-4
To-Do Role and To Do Type.....	3-4
Master Data Objects	3-4
Activity	3-4
Asset.....	3-6
Completion Event	3-8
Communication In	3-10

Contact	3-12
Manufacturer	3-13
Node	3-14
Outbound Message.....	3-16
Specifications.....	3-17
Service History	3-18
Work Order	3-19
Administrative Data Objects	3-21
Activity Types.....	3-21
Asset Types.....	3-22
Completion Event Types.....	3-23
Communication Types.....	3-25
Contact Types	3-26
Node Types	3-27
Service History Types	3-28
Base Package Data Areas.....	3-29
Oracle Utilities Operational Device Management Data Areas	3-32
Base Package Extendable Lookups	3-33
Oracle Utilities Operational Device Management Extendable Lookups.....	3-33

Chapter 4

Integrating with Other Systems.....	4-1
About Integrations	4-1
Integrated Functionality.....	4-1
Defining the External System.....	4-2
Data Synchronization.....	4-2
Integrating with Oracle Utilities Meter Data Management.....	4-10

Appendix A

Batch Controls	A-1
About Monitors	A-1
Non-Timed Monitors.....	A-1
Timed Monitors	A-1
Synchronization Requests.....	A-1
Base Package Batch Controls.....	A-1

Chapter 1

Overview

This guide describes how to configure Oracle Utilities Operational Device Management (ODM).

Using the Configuration Guide

This guide is intended for implementers and system administrators responsible for configuration and initial setup of the application with the purpose of presenting conceptual information on how the system works and how the various configuration options affect system functionality. Implementers and system administrators should plan data setup and design customizations based on this information.

When you are ready to implement your design, use [Chapter 2: Data Configuration](#) to guide you through the setup process. This chapter lists each object that can be configured, defines any prerequisites for configuration, and lists objects referenced by or associated to the object being configured.

Other Documentation

Please refer to the *Quick Install Guide* for a complete list of the installation and user documentation that is available for this product.

User Documentation

User documentation provides conceptual information and procedures related to working with the various objects used in the system, and includes the following documents:

- *Oracle Utilities Operational Device Management Application User Guide*

Embedded Help

The application includes extensive internal documentation, such as:

- **System Objects** - Detailed descriptions of system objects are included in the maintenance portals for those objects.
- **Lifecycles** - The lifecycle of each business object is described on the Lifecycle tab and depicted in flow diagrams on the Summary tab. This information is extremely useful for implementers and system administrators.
- **Functional Help** - Embedded help is provided for all non-obvious fields at the UI map section level. The help content can be customized during implementation by adding custom help to the Override Help Text attribute. If a field on a UI map has associated help text, a ? icon appears next to the field when the UI map is displayed. When the user clicks this icon, the contents of the Help Text attribute (or the Override Help Text attribute, if populated) is displayed in a pop-up window.

Online Help

The application includes context-sensitive help for all user interface screens within the system. Online help contains conceptual information and procedures related to working with the various objects used in the system.

The online help is divided into the following sections:

- Oracle Utilities Application Framework: Describes the features and functions of the application framework (F1).
- Oracle Utilities Operational Device Management: Describes the features and functions provided in the main application (W1).

Administrative Guides

The administrative guides provide installation, configuration and administration guidance.

- *Oracle Utilities Operational Device Management Quick Install Guide*
- *Oracle Utilities Operational Device Management Installation Guide*
- *Oracle Utilities Operational Device Management Database Administrator's Guide*

Oracle Utilities Application Framework User Guides

The Oracle Utilities Application Framework user guides provide information on working with the configuration tools and other Oracle Utilities Application Framework related processes needed for implementation.

- *Oracle Utilities Application Framework Business Process Guide*
- *Oracle Utilities Application Framework Administration Guide*

Supplemental Documentation

Supplemental documentation provides technical information related to system administration tasks and include the following documents:

- *Oracle Utilities Operational Device Management Administration Guide*
- *Oracle Utilities Operational Device Management Batch Server Administration Guide*

Application Overview

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

The application is comprised of two functional components which are built on top of the Oracle Utilities Application Framework:

- Oracle Utilities Asset Management Base

Oracle Utilities Asset Management Base provides the repository for asset information to be used by all current and future Oracle Utilities Asset Management applications.

- Oracle Utilities Operational Device Management

Oracle Utilities Application Framework Configuration Tools

The Oracle Utilities Application Framework configuration tools can be used to create and customize system entities, such as business objects, portals, zones and UI maps. Refer to the

Oracle Utilities Application Framework configuration tools documentation for instructions on using tools such as:

- Configuration Process Overview
- Data Areas
- Algorithms

Rather than duplicating concepts and procedures presented in the Oracle Utilities Application Framework configuration tools documentation, this documentation identifies Oracle Utilities Operational Device Management and Oracle Utilities Asset Management Base specific objects that can be configured and customized using that tool, as well as application parameters and objects that can be managed within the application components themselves.

As a configuration prerequisite, all individuals responsible for system configuration and implementation should be familiar with Oracle Utilities Application Framework and should have completed training on this tool.

The following sections provide high level descriptions on some of the key configuration tools.

“Lite” Business Objects

When a business object is read, the Framework dynamically constructs a SQL statement to retrieve the rows and columns associated with the business object's schema. If a process only needs a small subset of the elements from a business object, a “lite” business object that only references these elements can be used.

These lite business objects are used by the business processes (typically the construction of info strings) that only need a small subset of elements. Lite business objects are configured to never allow instances. In other words, they are only used to read existing instances of other business objects.

Data Areas

As described in the Oracle Utilities Application Framework documentation, data areas provide a common schema location for re-used schema structures. Data areas exist to help eliminate redundant element declaration. For example, if you have multiple schemas that share a common structure, you can set up a stand-alone data area schema for the common elements and then include it in each of the other schemas.

Many of the base package schemas make use of use data areas, and Oracle recommends that you take advantage of data areas where possible to avoid redundant data definition.

Algorithms

Many functions in the system are performed using user-defined algorithms (also referred to as plug-ins). For example, user-defined algorithms can be used to perform custom validation, editing, and estimation logic, or retrieve characteristic values for factors.

Custom algorithms allow implementers to modify how the system responds to certain system events. Refer to the following for related information:

- For a list of all related system events supported in the base package refer to [Chapter 3: System Objects in Detail](#).
- For instructions on creating custom algorithms, refer to the Oracle Utilities Application Framework documentation.
- To view information about specific algorithms provided with the base system, use the **Application Viewer** (also described in the Oracle Utilities Application Framework documentation). The **Application Viewer** provides information about the base logic, inputs, and outputs of each algorithm entity or plug-in spot.

Entity Naming Conventions

Certain naming conventions are used to identify and distinguish entities that belong to different Oracle applications. These conventions can help you locate entities and understand their context.

Each base product prefixes its entities with its 2-character owner code. For example:

- All Oracle Utilities Application Framework entities start with “F1”
- All Oracle Utilities Asset Management Base entities start with “W1”
- All Oracle Utilities Operational Device Management entities start with “W2”
- Custom entities should be prefaced with “CM”

Oracle recommends that you develop your own set of conventions for the entities you create. If you create new entities, DO NOT use these prefixes; use the prefix “CM” to identify entities that have been customized.

Demonstration Examples

The demonstration environment shipped with the base product provides setup examples that may be helpful as you implement your system.

Configuration Process Overview

This section provides a high-level and simplified overview of the configuration and implementation steps. For detailed steps, refer to [Chapter 2: Data Configuration](#).

Design Business Objects

A large part of configuration is centered around the creation of business objects. Nearly every object or set of data used by the system is defined in a business object, including assets, locations, activities, and so on.

Given the prominent role that business objects play, one of the most important implementation steps is identifying the business objects you will need to create to meet the requirements of your implementation. At a high level, this includes the following:

1. Identify the data to be defined by each business object.

This step defines the maintenance object to be used with the business object, and the data elements to include in the business object's schema. Leverage data areas where possible to minimize redundant data definition.

2. Identify the processing to be performed by each business object.

This step determines the specific algorithms/algorithm types, and business services (and related scripts and service programs) that will perform the processing required by your business objects.

3. Identify how users will access and work with each business object (if applicable).

This defines the portals, zones, navigation options, BPA scripts, etc. you will need to develop to allow users access to your business objects.

Create Business Objects

After identifying the above information, the next step is to create the business objects used in your implementation. At a high level, this includes the following steps:

1. Create configuration objects.

Before you can create business objects, you must first create the various configuration objects used by each business object, including:

- Application Services
- UI Maps (display and maintenance)
- Navigation Options
- Service Scripts
- Algorithm Types/Algorithms
- BPA Scripts/Business Service
- Other business objects
- Etc.

Where possible, leverage base package objects instead of creating your own to minimize data redundancy.

2. Create the business object.

Once the configuration objects used by the business object are in place, you can create the actual business object itself using the **Business Object** portal, referencing the configuration objects created in step 1 as appropriate.

Refer to the following sections for examples of base package business objects provided with the system and how to use them:

- [Chapter 3: System Objects in Detail](#)
- [Appendix A: Sample Implementation](#)

These are provided to illustrate how the base package objects were designed, and to serve as the basis for the business objects you create as part of your implementation.

Create Portals and Zones (as needed)

In most cases the base package portals and zones should be sufficient to meet your implementation requirements, however, you may want or need to create your own to allow users to work with your business objects. This can include creating any of the following:

- Context Menus
- Menus and Menu Items
- Navigation Keys
- Navigation Options
- Portals
- Zones

Configure General System Settings

General system settings such as time zone, to do types and roles, feature and master configurations, must be configured prior to creating data.

Create Data

The actual core data used by the application includes the various entities used in your implementation, such as assets, locations, completion events, and so on. This data must be created in the system before you can process any activities or receive and track assets.

As mentioned, refer to [Chapter 2: Data Configuration](#) for a checklist of data to create.

Creating this data includes the following steps:

1. Create admin “type” data.

Most of the objects used within the system have corresponding admin “type” objects that are used to define attributes common to instances of that type of object. For example, completion event types define attributes common to completion events in a certain category such as replicating assets or creating service history.

One of the most important attributes defined by an admin “type” object is the business object that will be used for instances of the object of that type. For example, completion events created from a completion event type that references the “W1-ServiceHistTypeCmpEvtTyp” business object will be based on that business object to create service history.

2. Create instances of the data.

Once the admin “type” data is in place, you can create the instances of the master data objects used in your implementation. These instances are the individual assets, locations, contacts, activities, etc.

Chapter 2

Data Configuration

This section provides a check list of the primary data that must be configured as part of your implementation including:

- Descriptions of all objects that must be defined as part of the setup process
- Identification of the order in which objects should be defined and any prerequisites for setup
- Identification of all objects associated with or referenced by each setup object
This provides a useful map of the relationship between objects in the system.

For detailed information on the system objects referenced in this section, refer to [Chapter 3: System Objects in Detail](#).

Setup Sequence

The sequence in which you configure system objects is very important. By following this sequence carefully, you can streamline the configuration process and reduce the amount of time required for setup.

In the setup tables that follow, the **Sequence** column displays the following codes:

- **L1** = Object has no setup prerequisites and should be defined before L2-L6 objects
- **L2** = Object has some L1 prerequisites and should be defined after all L1 objects have been defined and before L3 objects
- **L3** = Object should be defined after all L1 and L2 objects have been defined
- **L4** = Object should be defined after all L1, L2, and L3 objects have been defined
- **L5** = Object should be defined after all L1, L2, L3, and L4 objects have been defined

Administration Data Setup

These setup tasks are typically performed by an admin user and are accessed from the admin menu. The objects are defined at implementation and then updated only as needed when system configuration or foundation data changes.

Business Object Setup

Most implementations will configure custom business objects for most entities throughout the system. As indicated in the [Configuration Process Overview](#) these business objects must be created and configured prior to creating system data so that they can be used as part of the parameters on other objects. This section provides highlights on particular business objects that should be given special consideration.

Assets and Components

The application provides a number of utilities specific business objects that can generally be used to create assets and components for specific purposes. However, your implementation will likely require several business objects to define assets and components of other types.

Asset Replication

Specific configuration steps need to be completed to configure asset replication activities. Please refer to the section titled [Asset Replication Activity Configuration](#) in [Chapter 2: System Objects in Detail](#).

Completion Event Types

The base package completion event type business objects can be used out of the box, however, it is likely that your implementation will want to configure special business objects to capture specific system events. It is also important to note where there are optional completion event types might need to be used to capture incidental or unexpected events such as:

- Create follow-up activity
- Create service history
- Create attachment (asset and/or location)

Your implementation may want to carefully consider these types of events and possibly add them as optional on every completion event type where they might be needed.

Service History Types

The base package service history business objects can be used out of the box, however it is likely that your implementation will want to configure special business objects to capture specific service history events.

Specifications

Since specifications include such a wide variety of possible fields, there are no base package business objects that can be used to create new specifications. You must configure custom business objects indicating the fields required by your implementation.

Extendable Lookups

Extendable lookups can be used to store values or data requirements that are not handled by the base package lookup tables. Use the **Extendable Lookup** portal to create and maintain extendable lookups.

Extending Asset Statuses

If your implementation needs to create a new Asset Lifecycle BO with a status which differs from the base package, you can choose to create them by extending **W1-AssetDisposition**. With this extension, please note the following:

- ‘assetRelationship’ on the Asset Disposition has 3 values: Installed, Attached and Not Installed. Installed is applicable to assets when they are installed in service. Attached is applicable to components when they are attached to an asset. Not Installed is applicable when assets or components are in other statuses (in store, in receipt, in repair, rejected or retired).
- Since the assetRelationship is in a clob, the base package uses a naming convention using the asset disposition code. The first two characters should be ‘IN’ for installed, ‘AT’ for attached and ‘NP’ for not installed.

Application Framework Setup

Seq	Object	Functional Menu	Description	Prerequisites
L1	Country	General	Your organization's country.	None
L1	Currency	Financial	Your organization's native currency	None
L1	Display Profile	General	Controls how dates, times, and numbers displayed	None
L1	Language	General	The language to use for this implementation	None
L1	Time Zone	General	Your organization's base time zone	None
L1	To Do Role	General	Used to associate users with To Do entries	None
L1	Work Calendar	General	The work calendar for your organization, which identifies your public holidays	None
L2	Feature Configuration	General	Add a feature configuration of feature type ‘Schema Constants’ and set the value for ‘Default Country’	Country
L2	Installation Options	System	Control various aspects of the system. You must set up ‘Address Information’ and ‘Global Context’ algorithms	Time Zone, Language, Currency
L2	Master Configuration	System	Enables an implementation to capture various types of information in the system	
L2	To Do Type	General	Used to define types of To Do Entries	To Do Role
L2	User	Security	Defines a user's user groups, data access roles, portal preferences, default values, and To Do roles	Language, Display Profile, To Do Roles
L2	User Group	Security	A group of users who have the same degree of security access	User

Administrative Data Setup

Seq	Object	Prerequisites	Associated with / Referenced by
L1	Contact Type	None	Locations
L1	Organization Type	None	Locations
L1	Asset Location Type	None	Asset Type
L1	Storage Location Type	None	Asset Type
L1	Service History Type	None	Asset Type
L1	Completion Event Type	None	Activity Type
L2	Asset Type	Location Type Service History Type	Asset
L2	Activity Type	Completion Event Type	Activity
L2	Communication Type	None	Inbound Communication
L2	Manufacturer	Manufacturer BO	Specification
L2	Specification	Specification BO Asset Type	Asset Type
L2	Inbound Communication	Communication Type	
L2	Attachment	Attachment BO	Specification Asset Activity Completion Event

Master Data Setup

These setup tasks are typically performed by a planner and are accessed from the main menu. The objects, which include assets, contacts, locations, activities and work orders are defined during initial system setup and updated regularly as new assets are added or updates are needed.

Note: All basic Framework setup, including system and database setup and any modifications or extensions to base business objects, must have been completed before beginning these setup tasks. See the *Oracle Utilities Application Framework* documentation for more information.

To access the maintenance portals for the following objects, select **Main Menu** >[*object name*].

Seq	Object	Prerequisite	Associated with / Referenced By
L3	Contact	Contact Type	Location (optional)
L3	Asset Location	Asset Location Type	Assets
L3	Storage Location	Storage Location Type	Assets
L4	Asset	Asset Type	Activities, Work Order
L5	Activity	Activity Type Completion Event Type (as applicable)	
L5	Work Order		Activity

Chapter 3

System Objects in Detail

This section provides detailed descriptions of the objects that must be configured.

Oracle Utilities Application Framework Objects

The following sections provide details about the foundation objects that must be configured to establish base system functionality.

Feature Configuration

The following feature configuration must be defined:

Feature	Description
Default Country	Add a feature configuration of feature type 'Schema Constants' and set the value for 'Default Country'.
UI Hints	F1_LAF - Custom Look and Feel F1_MODULECFG - Module Configuration

Navigate to **Admin > Feature Configuration** to configure these options. This portal is part of Oracle Utilities Application Framework and is described in detail in the Oracle Utilities Application Framework documentation.

Installation Options

Installation options define the individual applications installed on your system and identify algorithms used to implement core system functions. These options also define global parameters such as the administrative menu style (alphabetical or functional), the country, language, currency code and the base time zone to use for this implementation. Take note of the following details regarding installation options:

- Installation options are stored in the installation record for your system.
- Navigate to **Admin > Installation Options > Framework** to configure these options. This portal is part of Oracle Utilities Application Framework and is described in detail in the Oracle Utilities Application Framework documentation.

Base Time Zone

The date/time attributes for all time-sensitive application entities, including start and end dates, are stored in the server application time zone in standard time and displayed in that time zone's legal time, which is the standard time adjusted for any seasonal shift.

The server time zone, also referred to as the Base Time Zone, must be correctly specified on the installation options record.

Note: The installation record does not dictate the server time zone, but rather must match it.

The date/time attributes for all time-sensitive application entities, including tasks and shifts, are stored in the server application time zone in standard time (i.e. they are independent of any seasonal time shifting adjustments, if applicable, in that time zone).

The system also allows data to be entered and displayed in a different time zone in legal time (i.e. adjusted for seasonal time shifting, managing the conversion back and forth between the data entry and the storage time zones).

Entities associated with a geographic location such as activities, crew shifts and meetings, are entered and displayed in their corresponding time zone. The rest of the application uses the user's preferred time zone to display date and time information.

The server time zone, also referred to as the Base Time Zone, must be correctly specified on the installation options record. A user specific time zone can be specified in user preferences.

Note: The installation record does not dictate the server time zone, but rather must match it.

Installation Algorithms

Installation algorithms implement global system functions and can be customized for each implementation. The base package supports the following installation options for system events:

- **Address Information:** Responsible for formatting address information for display throughout the system on the server.
- **Geocoding Service:** Responsible for geocoding an address (converting an address to a geocode latitude/longitude pair).
- **Global Context:** Sets global contexts (displayed in the Global Context dashboard zone) based on the value of existing global contexts. For example, if a service point is specified, this algorithm sets the asset by finding the most recently installed asset on the service point.
For the 360 degree view, the application provides the following global context fields: Asset ID, Node ID and Contact ID. If any of these context fields is set, the Global Context algorithm is responsible for populating the other context fields accordingly.
- **LDAP Import** - A special XAI service that reads the information from the LDAP store and creates the appropriate security entries by calling standard XAI services to maintain users and groups. The entire import process may be more appropriately called synchronize because groups, users, and the connections between them are synchronized between the LDAP store and your product.
- **Next ToDo Assignment** - Customize the next assignment plug-in on the installation options to follow your organization's work distribution rules. For example, when a user asks for the next assignment, business rules may be used to only consider To Do entries the user has the proper skills to resolve, prioritizing them based age, impacted dollar amount, etc. If this is configured it appears on the ToDo Dashboard zone.
- **Reporting Tool** - If you use a third-party reporting tool such as Oracle Utilities Business Intelligence, you must add an entry here to indicate the algorithm created when you configure the reporting system.

- **SMS Receive Service:** Responsible for processing incoming SMS messages sent from a crew.
- **SMS Send Service:** Responsible for processing outgoing SMS messages.
- **To Do Information** - Defines the basic information that appears throughout the system to describe a To Do entry.
- **To Do Pre-Creation:** Responsible for making To Do Entries searchable by linking them to their related entity via a characteristic.

Master Configuration

Master Configuration defines additional global parameters that control core system functions. This record must be set up for the system to properly operate. See **Admin Setup Reference Tables** on page 3-7 for more information on when to set up this record.

Key concepts related to Master Configuration are discussed in this section. Refer to the embedded help for descriptions of the settings on the Master Configuration page.

Hijri to Gregorian Date Mapping

The Hijri to Gregorian Date Mapping option is used to define the relationship between Hijri dates and Gregorian dates for each year.

Master Data Synchronization Configuration

The Master Data Synchronization Configuration option is used to define all foreign key references that need resolution. Each foreign key reference references the view that contains the external key / production key cross-reference. For entities that undergo both the initial and the ongoing synchronization, two views are specified. For entities that undergo the ongoing synchronization, an external system / ID type mapping is specified to cater for entities that might be synchronizing from more than one external system.

Seeder Sync Master Configuration

The Seeder Sync Master Configuration is used to define the maintenance objects (device, device configuration, etc.) that require synchronization. Each maintenance object references the synchronization business object that needs to be instantiated when processing a synchronization request for that maintenance object. For maintenance objects that undergo both initial and the ongoing synchronization, two business objects are specified.

Status Reason

Some asset status changes require a status reason to complete processing. Base processing provides status reasons and the associated statuses for the business objects indicated below. Navigate to **Admin Menu > Status Reason** to review or modify these status reasons.

Business Object	Description	Statuses where Reason is Required
W1-ActivityComplInboundComm	Activity Completion Inbound Communication	Completed, Discarded
W1-ActivityGenerator	Activity Generator Lifecycle	Canceled
W1-AdHocActivityCore	Ad Hoc Activity	Completed, Discarded
W1-CompletionEventRoot	Completion Event Root	Executed, Discarded

Business Object	Description	Statuses where Reason is Required
W1-InOutSvcAsset	In/Out of Service Asset	Out of Service
W1-InOutSvcComponent	In/Out Service Component	Out of Service
W1-InboundCommunicationRoot	Inbound Communication Root	Completed, Discarded
W1-LocalActivityCore	Local Activity	Completed, Discarded
W1-OutboundActivityCore	Outbound Activity	Executed, Completed, Discarded
W1-TrackedAsset	Tracked Asset	Retired, Rejected
W1-TrackedComponent	Tracked Component	Retired, Rejected

Time Zone

Defines the time zones that are applicable within the entire system. Once this is set, the base time zone can be entered in Installation Options.

To-Do Role and To Do Type

As events occur within the system, messages are triggered to describe work that requires attention. These messages, or To Do entries, are created based upon To Do Types and are assigned to users according to their To Do Roles. Configure to do Types and Roles by navigating to each of these options on the admin menu.

Master Data Objects

The following sections provide details on the Oracle Utilities Asset Management Base and Oracle Utilities Operational Device Management specific data that must be configured.

This information illustrates how the base package objects were designed, and can serve as the basis for any custom objects you create as part of your implementation.

Use the **Maintenance Object** portal and the **Application Viewer** to view more details about maintenance objects. Use the **Business Object** portal to view additional details concerning this business objects.

Activity

Activities provide a record of work done against assets or components.

Activity Configuration Notes

Custom activity business objects can reference any one of the base package business objects as their parent.

Asset Replication Activity Configuration

The following configuration steps must be completed to successfully set up asset replication:

1. Create a completion event type using the Replication Completion Event Type business object (W1-ReplicationComplEventType). On the completion event type, choose the General Asset Replication Completion Event business object (W1-AssetReplicationComplEvent) as the transaction BO.
2. Create an activity type using Basic Activity Type business object (W1-BasicActivityType). Set 'Category' to W1RE – Replication. Define the completion event type created above as the

only completion event type and as required. Choose the General Asset Replication Activity business object (W1-AssetReplicationActivity) as the transaction BO.

Note that the base General Asset Replication Activity business object (W1-AssetReplicationActivity) only allows users to change the badge number and/or serial number when replicating assets and everything else are kept the same as the template asset. If your implementation needs to override other information, you need to extend the BO.

Activity Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-ACT
Description	Activity
Service Name	W1-ACT (Activity Maintenance)
Tables	<ul style="list-style-type: none"> W1_ACTIVITY (Activity) - Primary W1_ACTIVITY_ATTACHMENT (Activity Attachment) - Child W1_ACTIVITY_CHAR (Activity Characteristic)- Child W1_ACTIVITY_IDENTIFIER (Activity Identifier) - Child W1_ACTIVITY_LOG (Activity Log) - Child W1_ACTIVITY_LOG_PARM (Activity Log Parameter) - Child W1_ACTIVITY_REL_OBJ (Activity Related Object) - Child

Base Package Activity Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-AdHocActivityCore	Ad Hoc Activity Core	Allow New Instances
W1-AssetReplicationActivity	General Asset Replication Activity	Allow New Instances
W1-LocalActivityCore	Local Activity Core	Allow New Instances
W1-OutboundActivityCore	Outbound Activity Core	Allow New Instances

Example Activity - W1-LocalActivityCore

This business object includes the following details:

Option/Field	Description
Business Object	W1-LocalActivityCore
Description	Local Activity Core
Maintenance Object	W1-ACT (Activity)
Application Service	W1-LOCALACTCRBOAS (Local Activity BO)
Instance Control	Allow New Instances

Option/Field	Description
Options	<ul style="list-style-type: none"> • Display UI Map: W1-LocalActivityCoreDisp (Local Activity Core - Display) • Portal Navigation Option: w1actTabMenu (Activity) • Pre-Processing Service Script: W1-ActPre (Activity Maintenance Pre-Processing) • Display Map Service Script: W1-LoActDtl (Local Activity - Retrieve Details for Display) • Maintenance UI Map: W1-LocalActivityCoreMaint (Local Activity Core - Maintenance)
Algorithms	<ul style="list-style-type: none"> • Information: W1-ACT-INFO (Activity Information) • Pre-Processing: W1-DF-ACT-TY (Set Schedules Defaults from Activity Type) • Pre-Processing: W1-DFNDAST (Default Location from Asset) • Validation: W1-DEL-ALLWD (Delete Allowed)
Lifecycle	<ul style="list-style-type: none"> • Pending • Validated • Validation Error • Work in Progress • Execute Completion Events • Completion Error • Completed • Discarded

Asset

Assets are the base devices or commodities owned by an organization. They must be received, inspected, worked on, installed and otherwise handled.

Asset Configuration Notes

Custom asset business objects can reference any one of the base package business objects as their parent.

Asset Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-ASSET
Description	Asset
Service Name	W1-ASSET (Asset Maintenance)
Tables	<ul style="list-style-type: none"> W1_ASSET (Asset) - Primary W1_ASSET_ATTACHMENT (Asset Attachment) - Child W1_ASSET_CHAR (Asset Characteristic)- Child W1_ASSET_IDENTIFIER (Asset Identifier) - Child W1_ASSET_LOG (Asset Log) - Child W1_ASSET_LOG_PARM (Asset Log Parameter) - Child W1_ASSET_NODE (Asset Location) - Child

Base Package Asset Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-AssetDisposition	Asset Disposition	Allow New Instances
W1-AssetDposHistInstallations	Asset Disposition History - Installations	Allow New Instances
W1-AssetDispositionHistory	Asset Disposition History	Does Not Allow New Instances
W1-AssetLite	Asset LITE	Does Not Allow New Instances
W1-InOutSvcAsset	In/Out of Service Asset	Does Not Allow New Instances
W1-InOutSvcComponent	In/Out Service Component	Does Not Allow New Instances
W1-TrackedAsset	Tracked Asset	Does Not Allow New Instances
W1-TrackedComponent	Tracked Component	Does Not Allow New Instances
W1-MDMAsset	MDM Asset	Allow New Instances
W1-AssetDposHistInStoreMvmnts	Asset Disposition History - In Store Moves	Allow New Instances

Example Asset - W1-InOutSvcAsset

This business object includes the following details:

Option/Field	Description
Business Object	W1-InOutSvcAsset

Option/Field	Description
Description	In/Out of Service Asset
Maintenance Object	W1-ASSET(Asset)
Application Service	W1-IOASSETBOAS (In/Out of Service Asset BO)
Instance Control	Do Not Allow New Instances
Options	<ul style="list-style-type: none"> Portal Navigation Option: w1assetTabMenu (Asset) Asset Class: W1AS
Algorithms	<ul style="list-style-type: none"> Audit: W1-ASTDPNAUD (Asset Current Disposition Validation) Information: W1-ASSETINFO (Asset Information) Pre-Processing: W1-ASTDPNDEF (Assign Default Disposition of an Asset)
Lifecycle	<ul style="list-style-type: none"> In Service Out of Service

Oracle Utilities Operational Device Management Asset Business Objects

The base package includes the following asset business objects:

Business Object	Description
W2-CommunicationComponent	Communication Component
W2-CommunicationRelay	Communication Relay
W2-ManualMeter	Manual Meter
W2-SmartMeter	Smart Meter

Completion Event

Completion events are used to create or update data to reflect the effect of an activity or command. Completion events are created upon successful receipt of inbound communications related to an activity or command.

Attributes used to define completion device events include the following:

- **Activity:** the activity (command) that initiated the completion event.
- **Sequence:** defines the relative order by which completion events for the activity are executed (in the event that more than one completion event is created for an activity).
- **Inbound Communication:** the inbound communication that triggered the completion event.
- **Event Date/Time:** the date and time of the completion event.

Completion Event Configuration Notes

Custom completion event business objects must reference W1-CompletionEventRoot as their parent business object.

Completion Event Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-CEVT
Description	Completion Event
Service Name	W1-CEVT (Activity Maintenance)
Tables	<ul style="list-style-type: none"> W1_CMPL_EVT (Completion Event) - Primary W1_CMPL_EVT_CHAR (Completion Event Characteristic) - Child W1_CMPL_EVT_LOG (Completion Event Log) - Child W1_CMPL_EVT_LOG_PARM (Completion Event Log Parameter) - Child W1_CMPL_EVT_REL_OBJ (Completion Event Related Object) - Child

Base Package Completion Event Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-CompletionEventRoot	Completion Event Root	Do Not Allow New Instances
W1-CreActivityPayCmpEvt	Create Activity Using Payload Compl Event	Allow New Instances
W1-CreAssetAttachCmpEvt	Create Asset Attachment Completion Event	Allow New Instances
W1-CreAssetPayCmpEvt	Create Asset Using Payload Cmpl Evt	Allow New Instances
W1-CreNodeAttachCmpEvt	Create Location Attachment Completion Evt	Allow New Instances
W1-CreServiceHistoryAttCmpEvt	Create Service History Attachment Cmpl Evt	Allow New Instances
W1-CreServiceHistoryPayCmpEvt	Create Svc Hist Using Payload Cmpl Evt	Allow New Instances
W1-AssetReplicationComplEvent	General Asset Replication Completion Event	Allow New Instances
W1-TrnAssetCmpEvent	Transition Asset Completion Event	Allow New Instances
W1-UpdAssetPayCmpEvt	Update Asset Using Payload Cmpl Evt	Allow New Instances
W1-UpdNodePayCmpEvt	Update Location Using Payload Cmpl Evt	Allow New Instances

Example Completion Event - W1-CompletionEventRoot

This business object includes the following details:

Option/Field	Description
Business Object	W1-CompletionEventRoot
Description	Completion Event Root
Maintenance Object	W1-CEVT(Completion Event)
Application Service	W1-CMPLEVTROOTBOAS (Completion Event Root BO)
Instance Control	Do Not Allow New Instances
Options	Portal Navigation Option: w1cevtTabMenu (Completion Event)
Algorithms	<ul style="list-style-type: none"> Information: W1-CEVT-INFO (Completion Event Information) Pre-Processing: W1-DFFRCEVT (Default Information from Completion Event Type) Validation: W1-DEL-ALLWD (Delete Allowed) Validation: W1-VAL-ACTNF (Validate Activity Not Finalized)
Lifecycle	<ul style="list-style-type: none"> Pending Executed Discarded

Communication In

Inbound Communications represent messages sent from an external system and are typically sent in to complete an activity.

Inbound Communication Configuration Notes

An inbound communication business object must be created for each type of message to be received from an external system. For most external systems, this is based on the types of messages the system is designed to send.

You must also create an XAI Inbound Service for each type of message to be received from an external system. XAI inbound services define the details of how messages are received from an external system, including the inbound communication business object (or business service or service script) to be invoked when the response message is received. As in the case of inbound communication business objects, the set of XAI inbound services you need to create is based on the types of messages the system is designed to send.

Inbound Communication Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-COMIN
Description	Communication In
Service Name	W1-COMIN (Communication In Maintenance)
Tables	<ul style="list-style-type: none"> W1_COMM_IN (Communication In) - Primary W1_COMM_IN_CHAR (Communication In Characteristic) - Child W1_COMM_IN_IDENTIFIER (Communication In Identifier) - Child W1_COMM_IN_LOG (Communication In Log) - Child W1_COMM_IN_LOG_PARM (Communication In Log Parameter) - Child W1_COMM_IN_REL_OBJ (Communication In Related Object)

Base Package Inbound Communication Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-ActivityComplInboundComm	Activity Completion Inbound Communication	Allow New Instances
W1-CreateActivityInboundComm	Create Activity Inbound Communication	Allow New Instances
W1-CreComActivityInboundComm	Create and Complete Activity Inbound Comm	Allow New Instances
W1-InboundCommunicationRoot	Inbound Communication Root	Do Not Allow New Instances

Example Inbound Communication

This business object includes the following details:

Option/Field	Description
Business Object	W1-ActivityComplInboundComm
Description	Activity Completion Inbound Communication
Maintenance Object	W1-COMIN(Communication In)
Application Service	W1-ACTCMPLINCOMMBOS (Activity Completion Inbound Communication BO)
Instance Control	Allow New Instances

Option/Field	Description
Options	<ul style="list-style-type: none"> • Related Administration BO: W1-GeneralCommunicationType (General Communication Type) • Display UI Map: W1-CommInboundDisp (Inbound Communication - Display) • Portal Navigation Option: w1cominTabMenu (Inbound Communication) • Pre-Processing Service Script: W1-CommInPre (Inbound Communication Maintenance Pre-Processing) • Display Map Service Script: W1-UpdComDtl (Activity Completion Communication In - Retrieve Details for Display) • Maintenance UI Map: W1-CommInboundMaint (Inbound Communication - Maintenance)
Algorithms	<ul style="list-style-type: none"> • Information: W1-COMMININF (Inbound Communication Information) • Pre-Processing: W1-DFCEVTID (Default Completion Event Identifier Details from Raw Message) • Validation: W1-DEL-ALLWD (Delete Allowed)
Lifecycle	<ul style="list-style-type: none"> • Pending • Validated • Validation Error • Create Completion Events • Completed • Discarded

Contact

Contacts establish a business or individual point of contact for locations.

Contact Configuration Notes

Custom contact business objects can reference any one of the base package business objects as their parent.

Contact Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-CONTACT
Description	Contact
Service Name	W1-CONTACT (Contact Maintenance)
Tables	<ul style="list-style-type: none"> W1_CONTACT (Contact) - Primary W1_CONTACT_CHAR (Contact Characteristics) - Child W1_CONTACT_EMAIL (Contact E-mail) - Child W1_CONTACT_IDENTIFIER (Contact Identifier) - Child W1_CONTACT_NAME (Contact Name) - Child W1_CONTACT_PHONE (Contact Phone) - Child

Base Package Contact Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-Business	Business	Allow New Instances
W1-Person	Person	Allow New Instances
W1-SynchronizationAddContact	Contact Synchronization Add	Allow New Instances

Example Contact- W1-Person

This business object includes the following details:

Option/Field	Description
Business Object	W1-Person
Description	Person
Maintenance Object	W1-CONTACT(Contact)
Application Service	W1-CONTACT(Contact MO)
Instance Control	Allow New Instances
Options	Portal Navigation Option: w1contctTabMenu (Contact)
Algorithms	Information: W1-PERS-INFO (Person Contact Information)

Manufacturer

Manufacturer Configuration Notes

Custom manufacturer business objects must reference W1-Manufacturer as their parent business object.

Manufacturer Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-MANUF
Description	Manufacturer
Service Name	W1-MANUF (Manufacturer Maintenance)
Tables	<ul style="list-style-type: none"> W1_MANUFACTURER (Manufacturer) - Primary W1_MANUFACTURER_CHAR (Manufacturer Characteristics) - Child W1_MANUFACTURER_IDENTIFIER (Manufacturer Identifier) - Child W1_MANUFACTURER_L (Manufacturer Language) - Child

Base Package Manufacturer Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-ManufacturerBundlingAddBO	Bundling Add BO for Manufacturer	Do Not Allow New Instances
W1-Manufacturer	Manufacturer	Allow New Instances
W1-ManufacturerPhysicalBO	Physical BO for Manufacturer	Do Not Allow New Instances

Example Manufacturer- W1-Manufacturer

This business object includes the following details:

Option/Field	Description
Business Object	W1-Manufacturer
Description	Manufacturer
Maintenance Object	W1-MANUF (Manufacturer)
Application Service	W1-MANUFACTURER (Manufacturer MO)
Instance Control	Allow New Instances
Options	Portal Navigation Option: w1manufTabMenu (Manufacturer)

Node

Nodes establish locations where assets and components are stored, installed, repaired, etc.

Node Configuration Notes

Custom node business objects can reference any one of the base package business objects as their parent.

Node Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-NODE
Description	Node
Service Name	W1-NODE (Contact Maintenance)
Tables	<ul style="list-style-type: none"> W1_NODE (Location/Organization) - Primary W1_NODE_ATTACHMENT (Location/Organization Attachment) - Child W1_NODE_CHAR (Location/Organization Characteristic) - Child W1_NODE_CONTACT (Location/Organization Contact) - Child W1_NODE_IDENTIFIER (Location/Organization Identifier) - Child W1_NODE_LOG (Location/Organization Log) - Child W1_NODE_LOG_PARM (Location/Organization Log Parameter) - Child W1_PEER_NODE (Peer Location/Organization) - Child

Base Package Node Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-AssetLocation	Asset Location	Allow New Instances
W1-NodeLite	Location LITE	Do Not Allow New Instances
W1-Organization	Organization This business object describes the structure and business rules common to a business unit in an organization's hierarchy.	Allow New Instances
W1-StorageLocation	Storage Location This business object describes the structure and business rules common to storage locations.	Allow New Instances

Example Node- W1-AssetLocation

This business object includes the following details:

Option/Field	Description
Business Object	W1-AssetLocation
Description	Asset Location
Maintenance Object	W1-NODE (Node)

Option/Field	Description
Application Service	W1-ASSETLOCBOAS (Asset Location BO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-AssetLocationDisp (Asset Location - Display) Portal Navigation Option: w1astlocTabMenu (Asset Location) Maintenance UI Map: W1-AssetLocationMaint (Asset Location - Maintenance)
Algorithms	<ul style="list-style-type: none"> Audit: W1-NODELOG (Audit Criticality) Information: W1-NODEINFO (Node Information)

Oracle Utilities Operational Device Management Node Business Objects

The base package includes the following node business objects:

Business Object	Description
W2-ServicePoint	Service Point
W2-Vehicle	Vehicle
W2-SynchronizationAddSP	SP Synchronization Add

Outbound Message

Outbound messages represent communications sent to external systems.

Outbound Message Configuration Notes

An outbound message type must also be created for each type of message to be sent to an external system.

Outbound Message Maintenance Object Details

Option/Field	Description
Maintenance Object	F1-OUTMSG
Description	Outbound Message
Service Name	FWLXOUTP (Outbound Message)
Tables	<ul style="list-style-type: none"> F1_OUTMSG (Outbound Message)- Primary F1_OUTMSG_ERRPARAM (Outbound Message Error Message Parameters) - Child

Base Package Outbound Message Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-NdAsAttToAsOutboundMessage	Location, Asset, and Atch To Asset Out Msg	Allow New Instances

Example Outbound Message- W1-NdAsAttToAsOutboundMessage

This business object includes the following details:

Option/Field	Description
Business Object	W1-NdAsAttToAsOutboundMessage
Description	Location, Asset, and Atch To Asset Out Msg
Maintenance Object	F1-OUTMSG (Outbound Message)
Application Service	FWLXOUTP (Outbound Message)
Instance Control	Allow New Instances
Algorithms	<ul style="list-style-type: none"> Pre-Processing: W1-PP-ACTTYP (Populate Activity Type Info) Pre-Processing: W1-PP-ND-INF (Populate Location Info) Pre-Processing: W1-PP-CT-INF (Populate Contact Info) Pre-Processing: W1-PP-ASINF (Populate Asset Info) Pre-Processing: W1-PPATASINF (Populate Attached to Asset Info)

Specifications

Specifications help define details about assets or components. Since specifications include such a wide variety of possible fields, there are no base package business objects that can be used to create new specifications. You must configure custom business objects indicating the fields required by your implementation.

Specification Configuration Notes

Custom specification business objects must reference W1-Specification as their parent business object.

Specification Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-SPEC
Description	Specification
Service Name	W1-SPEC (Specification Maintenance)
Tables	<ul style="list-style-type: none"> W1_SPECIFICATION (Specification) - Primary W1_SPECIFICATION_ATTACHMENT (Specification Attachment) - Child W1_SPECIFICATION_CHAR (Specification Characteristic) - Child W1_SPECIFICATION_IDENTIFIER (Specification Identifier) - Child W1_SPECIFICATION_L (Specification Language) - Child

Base Package Specification Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-SpecificationBundlingAddBO	Bundling Add BO for Specification	Do Not Allow New Instances
W1-Specification	Specification	Do Not Allow New Instances
W1-SpecificationPhysicalBO	Physical BO for Specification	Do Not Allow New Instances
W1-PeerSpecification	Peer Specification	Do Not Allow New Instances

Example Specification - W1-Specification

This business object includes the following details:

Option/Field	Description
Business Object	W1-Specification
Description	Specification
Maintenance Object	W1-SPEC (Specification)
Application Service	W1-SPECIFICATION (Specification MO)
Instance Control	Do Not Allow New Instances
Options	Portal Navigation Option: w1specTabMenu (Specification)

Oracle Utilities Operational Device Management Specification Business Objects

The base package includes the following specification business objects:

Business Object	Description
W2-CommunicationComponentSpec	Communication Component Specification
W2-CommunicationRelaySpec	Communication Relay Specification
W2-ManualMeterSpecification	Manual Meter Specification
W2-SmartMeterSpecification	Smart Meter Specification
W2-FirmwareSpecification	Firmware Specification

Service History

Service history provides a log or record of service, inspection, or other tasks performed on assets or components.

Service History Configuration Notes

Custom service history business objects must reference W1-ServiceHistory as their parent business object.

Service History Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-SVCHST
Description	Service History
Service Name	W1-SVCHST (Service History Maintenance)
Tables	<ul style="list-style-type: none"> W1_SVC_HIST (Service History) - Primary W1_SVC_HIST_ATTACHMENT (Service History Attachment) - Child W1_SVC_HIST_CHAR (Service History Characteristic) - Child W1_SVC_HIST_IDENTIFIER (Service History Identifier) - Child W1_SVC_HIST_LOG (Service History Log) - Child W1_SVC_HIST_LOG_PARM (Service History Log Parameter) - Child W1_SVC_HIST_REL_OBJ (Service History Related Object) - Child

Base Package Service History Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-ServiceHistory	Service History	Allow New Instances

Example Service History - W1-ServiceHistory

This business object includes the following details:

Option/Field	Description
Business Object	W1-ServiceHistory
Description	Service History
Maintenance Object	W1-SVCHST (Service History)
Application Service	W1-SVCHST (Service History MO)
Instance Control	Allow New Instances
Options	Portal Navigation Option: w1svchsTabMenu (Service History)
Algorithms	Information: W1-SVCHSINFO (Service History Information)

Work Order

Work orders are used to organize activities.

Work Order Configuration Notes

Custom work order business objects can reference any one of the base package business objects as their parent.

Work Order Maintenance Object Details

Option/Field	Description
Maintenance Object	W1-WORKORDER
Description	Work Order
Service Name	W1-WORKORDER (Work Order Maintenance)
Tables	<ul style="list-style-type: none"> W1_WO (Work Order) - Primary W1_WO_CHAR (Work Order Characteristics) - Child W1_WO_IDENTIFIER (Work Order Identifier) - Child W1_WO_LOG (Work Order Log) - Child W1_WO_LOG_PARM (Work Order Log Parameters) - Child

Base Package Work Order Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-ActivityGenerator	Activity Generator Lifecycle	Allow New Instances
W1-AssetCriteriaActGenerator	Asset Criteria	Allow New Instances
W1-AssetListActGenerator	Asset List	Allow New Instances
W1-CompnCriteriaActGenerator	Component Criteria	Allow New Instances
W1-CompnAssetListActGenerator	Component List	Allow New Instances
W1-NodeCriteriaActGenerator	Location Criteria	Allow New Instances
W1-BasicWorkOrder	Basic Work Order	Allow New Instances

Example Work Order - W1-BasicWorkOrder

This business object includes the following details:

Option/Field	Description
Business Object	W1-BasicWorkOrder
Description	Basic Work Order
Maintenance Object	W1-WORKORDER (Work Order)
Application Service	W1-BASICWOBOAS (Basic Work Order BO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-BasicWODisplay (Basic Work Order - Display) Portal Navigation Option: w1woTabMenu (Work Order) Display Map Service Script: W1-BasWODts (Basic WO: Retrieve Details for Display) Maintenance UI Map: W1-BasicWOMaint (Basic Work Order - Maintenance)
Algorithms	Validation: W1-BASWOINFO (Basic Work Order Information)

Administrative Data Objects

Administrative data objects establish the “types” upon which the master data objects are based. In most cases, custom business objects do not need to be created for administrative data objects, however the maintenance object and business object details for these types is provided below for reference.

Activity Types

Option/Field	Description
Maintenance Object	W1-ACTTY
Description	Activity Type
Service Name	W1-ACTTY (Activity Type Maintenance)
Tables	<ul style="list-style-type: none"> W1_ACTIVITY_TYPE (Activity Type) - Primary W1_ACTIVITY_TYPE_ATTACHMENT (Activity Type Attachment) - Child W1_ACTIVITY_TYPE_CEVT_TYPE (Activity Type Completion Event Type) - Child W1_ACTIVITY_TYPE_CHAR (Activity Type Characteristic) - Child W1_ACTIVITY_TYPE_IDENTIFIER (Activity Type Identifier) - Child W1_ACTIVITY_TYPE_L (Activity Type Language) - Child W1_ACTIVITY_TYPE_OUTMSG_TYPE (Activity Type Outbound Message Type) - Child

Base Package Activity Type Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-BasicActivityType	Basic Activity Type	Allow New Instances
W1-ActivityTypeBundlingAddBO	Bundling Add BO for Activity Type	Do Not Allow New Instances
W1-OutboundActivityType	Outbound Activity Type	Allow New Instances
W1-ActivityTypePhysicalBO	Physical BO for Activity Type	Do Not Allow New Instances
W1-ScheduledActivityType	Scheduled Activity Type	Allow New Instances

Example Activity Type - W1-BasicActivityType

This business object includes the following details:

Option/Field	Description
Business Object	W1-BasicActivityType

Option/Field	Description
Description	Basic Activity Type
Maintenance Object	W1-ACTTY (Activity)
Application Service	W1-ACTTY (Activity Type MO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-BasicActTypeDisplay (Basic Activity Type - Display) Portal Navigation Option: w1acttyTabMenu (Activity Type) Maintenance UI Map: W1-BasicActTypeMaint (Basic Activity Type - Maintenance)
Algorithms	Validation: W1-EXCHNDVAL (Exception Handling Validation)

Asset Types

Option/Field	Description
Maintenance Object	W1-ASSETTYPE
Description	Asset Type
Service Name	W1-ASSETTYPE (Asset Type Maintenance)
Tables	<ul style="list-style-type: none"> W1_ASSET_TYPE (Asset Type) - Primary W1_ASSET_TYPE_CHAR (Asset Type Characteristics) - Child W1_ASSET_TYPE_L(Asset Type Language) - Child W1_ASSET_TYPE_NODE_TYPE (Valid Asset Type Location Type) - Child W1_ASSET_TYPE_SVC_HIST_ TYPE (Asset Type Service History Type) - Child

Base Package Asset Type Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-AssetType	Asset Type	Allow New Instances
W1-AssetTypeBundlingAddBo	Bundling Add BO for Asset Type	Do Not Allow New Instances
W1-ComponentType	Component Type	Allow New Instances
W1-AssetTypePhysicalBO	Physical BO for Asset Type	Do Not Allow New Instances

Example Asset Type - W1-AssetType

This business object includes the following details:

Option/Field	Description
Business Object	W1-AssetType
Description	Asset Type

Option/Field	Description
Maintenance Object	W1-ASSETTYPE(Asset Type)
Application Service	W1-ASSETTYPE (Asset Type MO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-AssetTypeDisp (Asset Type Display) Portal Navigation Option: w1asttypTabMenu (Asset Type) Pre-Processing Service Script: W1-AsfTyPre (Asset Type Maintenance Pre-Processing) Maintenance UI Map: W1-AssetTypeMaint (Asset Type Maintenance)

Completion Event Types

Option/Field	Description
Maintenance Object	W1-CEVTT
Description	Completion Event Type
Service Name	W1-CEVTT (Completion Event Type)
Tables	<ul style="list-style-type: none"> W1_CMPL_EVT_TYPE (Completion Event Type) - Primary W1_ACTIVITY_TYPE_CEVT_TYPE (Activity Type Completion Event Type) - Child W1_CMPL_EVT_TYPE_CHAR (Completion Event Type Characteristic) - Child W1_CMPL_EVT_TYPE_IDENTIFIER (Completion Event Type Identifier) - Child W1_CMPL_EVT_TYPE_L (Completion Event Type Language) - Child

Base Package Completion Event Type Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-ActivityCompletionEventType	Activity Completion Event Type	Allow New Instances
W1-AssetCompletionEventType	Asset Completion Event Type	Allow New Instances
W1-AssetDposCmpEvtType	Asset Disposition Completion Event Type	Allow New Instances
W1-ComplEventTypeBundlingAddBO	Bundling Add BO for Completion Event Type	Do Not Allow New Instances
W1-DataAreaCmpEvtType	Data Area Completion Event Type	Allow New Instances
W1-GeneralCompletionEventType	General Completion Event Type	Allow New Instances

Business Object	Description	Instance Control
W1-ComplEventPhysicalBO	Physical BO for Completion Event Type	Do Not Allow New Instances
W1-ReplicationComplEventPhysicalBO	Replication Completion Event Type	Allow New Instances
W1-ServiceHistTypeCmpEvtType	Service History Completion Event Type	Allow New Instances

Example Completion Event Type- W1-ActivityCompletionEventType

This business object includes the following details:

Option/Field	Description
Business Object	W1-ActivityCompletionEventType
Description	Activity Completion Event Type
Maintenance Object	W1-CEVTT(Completion Event Type)
Application Service	W1-CEVTT (Completion Event Type MO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-ActivityCmplEvtTypeDisplay (Activity Completion Event Type - Display) Portal Navigation Option: w1cevtTabMenu (Completion Event Type) Maintenance UI Map: W1-ActivityCmplEvtTypeMaint (Activity Completion Event Type - Maint) Information Required: 01
Algorithms	<ul style="list-style-type: none"> Validation: W1-VALATTILST (Validate Attachment List) Validation: W1-CEVTTXPVL (Completion Event Type XPath Validation)

Communication Types

Option/Field	Description
Maintenance Object	W1-COMTY
Description	Communication Type
Service Name	W1-COMTY (Communication Type Maintenance)
Tables	<ul style="list-style-type: none"> W1_COMM_TYPE (Communication Type) - Primary W1_COMM_TYPE_CHAR (Communication Type Characteristic) - Child W1_COMM_TYPE_L (Communication Type Language) - Child

Base Package Communication Type Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-CommTypeBundlingAddBO	Bundling Add BO for Communication Type	Do Not Allow New Instances
W1-GeneralCommunicationType	General Communication Type	Allow New Instances
W1-CommunicationTypePhysicalBO	Physical BO for Communication Type	Do Not Allow New Instances

Example Communication Type- W1-GeneralCommunicationType

This business object includes the following details:

Option/Field	Description
Business Object	W1-GeneralCommunicationType
Description	General Communication Type
Maintenance Object	W1-COMTY(Communication Type)
Application Service	W1-COMTY (Communication Type MO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-GeneralCommTypeDisp (General Communication Type - Display) Portal Navigation Option: w1comtyTabMenu (Communication Type) Maintenance UI Map: W1-GeneralCommTypeMaint (General Communication Type - Maintenance)
Algorithms	<ul style="list-style-type: none"> Validation: W1-EXCHNDVAL (Exception Handling Validation) Validation: W1-COMTYTXPV (Communication Type Target XPaths Validation)

Contact Types

Option/Field	Description
Maintenance Object	W1-CONTACTTYPE
Description	Contact Type
Service Name	W1-CONTACTTYPE (Contact Type Maintenance)
Tables	<ul style="list-style-type: none"> W1_CONTACT_TYPE (Contact Type) - Primary W1_CONTACT_TYPE_CHAR (Contact Type Characteristics) - Child W1_CONTACT_L (Contact Type Language) - Child

Base Package Contact Type Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-ContactTypeBundlingAddBO	Bundling Add BO for Contact Type	Do Not Allow New Instances
W1-ContactType	Contact Type	Allow New Instances
W1-ContactTypePhysicalBO	Physical BO for Contact Type	Do Not Allow New Instances

Example Contact Type- W1-ContactType

This business object includes the following details:

Option/Field	Description
Business Object	W1-ContactType
Description	ContactType
Maintenance Object	W1-CONTACTTYPE(Contact Type)
Application Service	W1-CONTACTTYPE(Contact Type MO)
Instance Control	Allow New Instances
Options	Portal Navigation Option: w1conttyTabMenu (Contact Type)

Node Types

Option/Field	Description
Maintenance Object	W1-NODETYPE
Description	Node Type
Service Name	W1-NODETYPE (Node Type Maintenance)
Tables	<ul style="list-style-type: none"> W1_NODE_TYPE (Location/Organization Type) - Primary W1_NODE_TYPE_CHAR (Location/Organization Type Characteristics) - Child W1_NODE_TYPE_L (Location/Organization Type Language) - Child W1_PARENT_NODE_TYPE (Parent Location/Organization Type) - Child W1_PEER_NODE_TYPE (Peer Location/Organization Type) - Child

Base Package Node Type Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-AssetLocationType	Asset Location Type	Allow New Instances
W1-NodeTypeBundlingAddBO	Bundling Add BO for Node Type	Do Not Allow New Instances
W1-OrganizationType	Organization Type	Allow New Instances
W1-NodeTypePhysicalBO	Physical BO for Node Type	Do Not Allow New Instances
W1-StorageLocationType	Storage Location Type	Allow New Instances

Example Node Type- W1-AssetLocationType

This business object includes the following details:

Option/Field	Description
Business Object	W1-AssetLocationType
Description	Asset Location Type
Maintenance Object	W1-NODETYPE (Node Type)
Application Service	W1-ASSETLOCTYPEBOAS (Asset Location Type BO)
Instance Control	Allow New Instances
Options	Portal Navigation Option: w1aslotyTabMenu (Asset Location Type)

Service History Types

Option/Field	Description
Maintenance Object	W1-SVCHSTTY
Description	Service History Type
Service Name	W1-SVCHST (Service History Type Maintenance)
Tables	<ul style="list-style-type: none"> W1_SVC_HIST_TYPE (Service History Type) - Primary W1_SVC_HIST_TYPE_CHAR (Service History Type Characteristic) - Child W1_SVC_HIST_TYPE_L (Service History Type Language) - Child W1_SVC_SCHED (Service Schedule) - Child

Base Package Service History Business Objects

The base package includes the following business objects:

Business Object	Description	Instance Control
W1-SvcHstTypeBundlingAddBO	Bundling add BO for Service History Type	Do Not Allow New Instances
W1-SvcHstTypePhysicalBO	Physical BO for Service History Type	Do Not Allow New Instances
W1-ServiceHistoryType	Service History Type	Allow New Instances

Example Service History Type - W1-ServiceHistoryType

This business object includes the following details:

Option/Field	Description
Business Object	W1-ServiceHistoryType
Description	Service History Type
Maintenance Object	W1-SVCHSTTY (Service History Type)
Application Service	W1-SVCHSTTY (Service History Type MO)
Instance Control	Allow New Instances
Options	<ul style="list-style-type: none"> Display UI Map: W1-ServiceHistoryTypeDisp (Service History Type - Display) Portal Navigation Option: w1svhstyTabMenu (Service History Type) Maintenance UI Map: W1-ServiceHistoryTypeMaint (Service History Type - Maintenance)
Algorithms	Validation: W1-SVCSCHVAL (Service History Work Order Creation Interval Validation)

Base Package Data Areas

Data areas provide a common schema location for re-used schema structures. The table below lists the available base package data areas.

Data Area	Description
W1-ActCmpInboundCommMain	Activity Completion Inbound Comm Main
W1-ActCmplInboundCommCore	Activity Completion Inbound Comm Core
W1-ActivityCore	Activity Core
W1-ActivityInfo	Activity Info
W1-ActivityScheduleDetails	Activity Schedule Details
W1-ActivityTypeCommon	Activity Type Common
W1-ActivityTypeCore	Activity Type Core
W1-ActivityTypeIdentifier	Activity Type Identifier
W1-ActivityTypeInfo	Activity Type Info
W1-ActivityTypeMain	Activity Type Main
W1-ActivityTypeOutboundInfo	Activity Type Outbound Info
W1-ActivityTypeScheduleInfo	Activity Type Schedule Info
W1-AssetCommonAssetNodeDetail	Common Asset Node fields
W1-AssetDposHistoryInboundSync	Asset Disposition History - Inbound Sync
W1-AssetDposHistoryNoFKRefs	Asset Disposition History - No FK Refs
W1-AssetDposHistoryNoNode	Asset Disposition History - No Node
W1-AssetIdentifier	Asset Identifier
W1-AssetIdentifierAlt1	Asset Identifier Alt1
W1-AssetIdentifierAlt2	Asset Identifier Alt2
W1-AssetIdentifierAlt3	Asset Identifier Alt3
W1-AssetInfo	Asset Info
W1-AssetListData	Common Asset List Data
W1-AssetLocationMain	Asset Location Main
W1-AssetLocationTypeMain	Asset Location Type Main
W1-AssetMain	Asset - Main
W1-AssetRepActAssets	Asset Replication Activity Assets
W1-AssetRepActMain	Asset Replication Activity Main
W1-AssetTypeMain	Asset Type - Main
W1-AttachedToAssetIdentifier	Attached To Asset Identifier
W1-AttachedToAssetInfo	Attached To Asset Info
W1-AttachmentDataMover	Attachment Data Mover

Data Area	Description
W1-AttachmentSuppression	Attachment Suppression
W1-BusinessMain	Business Main
W1-CmnAdminExceptionHandling	Common Admin Exception Handling Information
W1-CommonActivityInfo	Common Activity Information
W1-CommonAddressInfo	Common Address Information
W1-CommonAssetCriteria	Common Asset Criteria
W1-CommonAssetDetail	Common Asset Detail
W1-CommonAssetDposDetail	Common Disposition Detail for Asset
W1-CommonAssetInfo	Common Asset Information
W1-CommonAstDposHistDposDetail	Disposition Detail for Historical Records
W1-CommonCompletionEvent	Completion Event Common
W1-CommonCompnCriteria	Common Component Criteria
W1-CommonComponentDetail	Common Component Detail
W1-CommonComponentDposDetail	Common Disposition Detail for Component
W1-CommonExtendLookupDetail	Common Detail of Extendable Lookup BOs
W1-CommonGeneratorData	Common Generator Data
W1-CommonNodeCriteria	Common Location Criteria
W1-CommonNodeInfo	Common Location Information
W1-CommonNodeType	Common Node Type
W1-CommonRelationship	Relationship Common
W1-CommonServiceHistory	Common Service History
W1-CommonServiceHistoryType	Common Service History Type
W1-CommonSnapshotLocation	Common for Snapshot Location
W1-CommonSyncReqInDtlDisplay	Common for Sync Request Details Display
W1-CommonSyncRequestAsset	Common for Sync Request Asset
W1-CommonSyncRequestAssetNode	Common for Sync Request Asset-Node
W1-CommonSyncRequestContact	Common for Sync Request Contact
W1-CommonSyncRequestInData	Sync Request Inbound Common Data
W1-CompletionEventDataMover	Completion Event Data Mover
W1-CompletionEventList	Completion Event List
W1-CompletionEventMain	Completion Event Main
W1-CompletionEventRoot	Completion Event Root
W1-CompletionEventTypeMain	Completion Event Type Main
W1-CompletionEventTypeRoot	Completion Event Type Root

Data Area	Description
W1-ComponentTypeMain	Component Type - Main
W1-ContactInfo	Contact Info
W1-ContactTypeMain	Contact Type Main
W1-CrePayloadCmplEvtCommon	Create Payload Completion Event Common
W1-DataMover	Data Mover
W1-DataMoverServiceScriptInfo	Data Mover Service Script
W1-ErrorInfoData	Error Information Data
W1-GenericPayload	Generic Payload
W1-InboundCommTypeCore	Inbound Communication Type Core
W1-InboundCommunicationCore	Inbound Communication Core
W1-InboundCommunicationMain	Inbound Communication Main
W1-LocationIdentifierAlt1	Location Identifier Alt1
W1-LocationInfo	Location Address Info
W1-ManufacturerMain	Manufacturer Main
W1-MDM2AssetSnapshot	MDM2 Asset Snapshot
W1-MDMAssetSnapshot	MDM Asset Snapshot
W1-MessageValidation	Message Validation
W1-NodeContacts	Node Contacts
W1-NodeCriticality	Node Criticality details
W1-NodeFieldInfo	Node Field Information
W1-NodeIdentifier	Location Identifier
W1-NodeInfo	Location Info
W1-NodeLocation	Location Address Information
W1-ObjectsCreated	Objects Created
W1-OrganizationMain	Organization Main
W1-OrganizationTypeMain	Organization Type Main
W1-OutboundMessageCore	Outbound Message Core
W1-PayloadDataMover	Payload Data Mover
W1-PeerSpecCommon	Common Elements For Peer Specification BOs
W1-PersonMain	Person Main
W1-RetryDetails	Retry Details
W1-ServiceHistoryExclusionInfo	Service History Exclusion Information
W1-ServiceHistoryMain	Service History Main
W1-ServiceHistoryTypeMain	Service History Type Main

Data Area	Description
W1-SpecificationCommon	Common elements for specification BOs
W1-StorageLocationMain	Storage Location Main
W1-StorageLocationTypeMain	Storage Location Type Main
W1-SyncConstructSnapshot	Sync Construct Snapshot
W1-UICreationPayloadDataMover	UI Creation Payload Data Mover
W1-UpdPayloadCmplEvtCommon	Update Payload Completion Event Common
W1-ValidParentNodeTypes	Valid Parent Node Types Details
W1-WorkOrderCore	Work Order Core
W1-WorkOrderData	Common Work Order Data

Oracle Utilities Operational Device Management Data Areas

The table below lists the available Oracle Utilities Operational Device Management base package data areas.

Data Area	Description
W2-CommonFirmwareReleaseDetail	Common Firmware Release Detail
W2-CommonFirmwareReleaseDetail	Common Firmware Release Detail
W2-CommonSnapshotSP	Common for Snapshot Service Point
W2-FirmwareUpdate	Completion Event Fragment to Update Firmware
W2-MetrologyFirmwareUpdate	Completion Event Fragment to Update Metrology Firmware
W2-NICFirmwareUpdate	Completion Event Fragment to Update NIC Firmware
W2-ServicePointContacts	Service Point Contacts
W2-ServicePointFieldInfo	Service Point Field Information
W2-ServicePointLifeSupport	Service Point Life Support
W2-ServicePointMain	Service Point Main
W2-VehicleContacts	Vehicle Contacts
W2-VehicleMain	Vehicle Main

Use the **Data Area** portal to view more details concerning these data areas.

Base Package Extendable Lookups

Option/Field	Description
Business Object	W1-AssetDisposition
Description	Asset Disposition
Maintenance Object	F1-EXT LKUP(Extendable Lookup)
Application Service	F1LEXTLKUP (Extendable Lookup Value MO)
Instance Control	Allow New Instances
Options	Portal Navigation Option: f1exlkpTabMenu (Extendable Lookup)
Algorithms	Validation: W1-ASTDPNVAL (Asset Disposition Validation)

Oracle Utilities Operational Device Management Extendable Lookups

Business Object	Description
W2-CommunicationComponentCfg	Communication Component Configuration
W2-Key	Key
W2-ManualMeterConfiguration	Manual Meter Configuration
W2-ServicePointInstruction	Service Point Instruction
W2-ServicePointWarning	Service Point Warning
W2-SmartMeterConfiguration	Smart Meter Configuration
W2-SiteLocation	Site Location

Chapter 4

Integrating with Other Systems

This chapter provides information related to integrating with other applications.

About Integrations

The application integrates with external systems such as Oracle Utilities Meter Data Management through inbound and outbound messaging, or communications. Communications are records of messages sent between Oracle Utilities Operational Device Management and an external system and are most often created as a result of an activity.

In a typical integration the following apply:

- Oracle Utilities Operational Device Management is typically the “system of record” for asset data.
- Once devices, or assets, are received and inspected in Oracle Utilities Operational Device Management, the object lifecycle sends data about the device to the external system.
- Service points and any associated contact information is sent as an inbound communication to Oracle Utilities Operational Device Management from the external system.
- Activity completion information, such as device installation or removal, is sent to Oracle Utilities Operational Device Management from the external system to keep location data up to date.

Integrated Functionality

The following list provides some of the possible functionality that can be completed in an integration between Oracle Utilities Operational Device Management and a meter data management system:

- Move new devices into the Oracle Utilities Operational Device Management asset register, resulting in outbound sync to the external system
- Retiring devices in Oracle Utilities Operational Device Management (Retired status in lifecycle)
- Changing device attributes in Oracle Utilities Operational Device Management (such as serial number change)
- Creation of new service points in the external system, triggering an outbound sync to Oracle Utilities Operational Device Management.
- Change of key service point information (address, geo location, related contacts) in the external system, triggering an outbound sync to Oracle Utilities Operational Device Management.

- Deactivation of a service point in the external system, triggering an outbound sync to Oracle Utilities Operational Device Management
- Physical install of device in the external system, triggering an outbound sync to Oracle Utilities Operational Device Management
- Physical removal of device in the external system, triggering an outbound sync to Oracle Utilities Operational Device Management

Defining the External System

You must create an External System for each external system to which Oracle Utilities Operational Device Management will communicate. Each external system defines a set of outbound message types that will be sent to that system. Each external system outbound message type also specifies the following:

- The processing method used to send the message (Batch, XAI, or Real-time)
- The corresponding XAI senders
- Batch Control (if Processing Method is set to Batch)
- Message XSL, W3C Schema, and Response XSL (as applicable)

Data Synchronization

In most integrations synchronization of data between the two systems is supported through a set of business objects, master configurations, batch controls, and pre-configured XAI Inbound Services.

Types of Requests

Data synchronization is performed via synchronization requests sent from the external system via a middleware integration component. The application supports three types of synchronization requests:

Initial Synchronization Requests

Initial synchronization requests are used during the initial configuration of the integration. They facilitate import of data that synchronizes service points, locations, and contact information.

Ongoing Synchronization Requests

Ongoing synchronization requests are used when updating existing data in Oracle Utilities Operational Device Management based on changes in corresponding data in the external system. Ongoing synchronization requests can be used to update locations, assets or components and to send activity completion information.

Composite Synchronization Requests

Composite synchronization requests are requests that contain synchronization requests for multiple types of data within a single request. For example, a composite request could contain requests to update a location, and complete an activity. This supports situations where multiple types of data must be updated based on a single change in the external system.

Base Package Synchronization Request Business Objects

Navigate to **Admin > Business Object** to review or modify this information.

The table below lists the base package synchronization request business objects:

Business Object	Description	Based on
W1-InitialSyncRequestAsset	Asset Initial Sync Request	F1-SYNCREQIN Inbound Sync Request

Business Object	Description	Based on
W1-InitialSyncRequestContact	Contact Initial Sync Request Provides synchronization of contact information	F1-SYNCREQIN Inbound Sync Request
W1-InitialSyncRequestLocation	Location Initial Sync Request	F1-SYNCREQIN Inbound Sync Request
W1-MDMAssetSyncReqOutMsg	MDM Asset Sync Request Outbound Message	F1-OUTMSG Outbound Message
W1-MDMAssetSyncRequest	MDM Asset Synchronization Request Defines the behavior of an outbound sync request for Oracle Utilities Meter Data Management. The schema elements define information required by Oracle Utilities Meter Data Management to maintain devices and support other processes in Oracle Utilities Meter Data Management. The external system and outbound message type used for message creation are defined in the Oracle Utilities Meter Data Management Integration Master Configuration BO (W1-MDMIntegrationMasterConfig). The base package supplies the To Do Type W1-SYRQO for use with this process.	F1-SYNC REQ Sync Request

Business Object	Description	Based on
W1-OngoingSyncRequestAssetNode	<p data-bbox="935 218 1187 275">Asset-Node Ongoing Sync Request</p> <p data-bbox="935 306 1252 506">Defines the behavior of an ongoing sync request. The schema elements define information required to maintain the Asset-Node information in Oracle Utilities Operational Device Management.</p> <p data-bbox="935 537 1252 968">As part of sync request processing, an acknowledgement message is sent to the external system (either positive or negative). The "Outbound Message Type" BO option contains a reference to the outbound message BO to use for this purpose. The base package includes BO W1-OutboundAcknowledgeMessage to be used on the outbound message type configuration. Refer to Defining Outbound Message Types in the user documentation for more information.</p> <p data-bbox="935 999 1252 1083">The base package also supplies the To Do Type W1-SYRQI for use with this process.</p>	F1-SYNCREQIN Inbound Sync Request

Business Object	Description	Based on
W1-OngoingSyncRequestContact	<p data-bbox="932 218 1256 243">Contact Ongoing Sync Request</p> <p data-bbox="932 277 1256 478">This business object defines the behavior of an ongoing sync request. The schema elements define information required to maintain the Contact in Oracle Utilities Operational Device Management.</p> <p data-bbox="932 512 1256 940">As part of sync request processing, an acknowledgement message is sent to the external system (either positive or negative). The "Outbound Message Type" BO option contains a reference to the outbound message BO to use for this purpose. The base package includes BO W1-OutboundAcknowledgeMessage to be used on the outbound message type configuration. Refer to Defining Outbound Message Types in the user documentation for more information.</p> <p data-bbox="932 974 1256 1058">The base package also supplies the To Do Type W1-SYRQI for use with this process.</p>	<p data-bbox="1289 218 1516 243">F1-SYNCREQIN</p> <p data-bbox="1289 247 1516 273">Inbound Sync Request</p>
W1-OngoingSyncRequestLocation	<p data-bbox="932 1087 1256 1113">Location Ongoing Sync Request</p> <p data-bbox="932 1146 1256 1314">Defines the behavior of an ongoing sync request. The schema elements define information required to maintain the Location in Oracle Utilities Operational Device Management.</p> <p data-bbox="932 1348 1256 1776">As part of sync request processing, an acknowledgement message is sent to the external system (either positive or negative). The "Outbound Message Type" BO option contains a reference to the outbound message BO to use for this purpose. The base package includes BO W1-OutboundAcknowledgeMessage to be used on the outbound message type configuration. Refer to Defining Outbound Message Types in the user documentation for more information.</p> <p data-bbox="932 1810 1256 1894">The base package also supplies the To Do Type W1-SYRQI for use with this process.</p>	<p data-bbox="1289 1087 1516 1113">F1-SYNCREQIN</p> <p data-bbox="1289 1117 1516 1142">Inbound Sync Request</p>

Business Object	Description	Based on
W1-OutboundAcknowledgeMessage	Outbound Acknowledgement Message	F1-OUTMSG Outbound Message
W1-SeederSyncReqMasterConfig	Seeder Sync Request Master Configuration	F1-MSTCFG Master Configuration
W1-SyncRequestSeeder	<p>Synchronization Request Seeder</p> <p>Defines the behavior of a seeder sync request. Its schema contains elements common to all sync requests and has placeholders for the sync request details that vary for each individual sync request. It contains a pre-processing algorithm that determines the sync request BO to instantiate based on the incoming external system, MO and initial load indicator on the sync request (see also algorithm type W1-DETSYNRBO and BO W1-SeederSyncMasterConfig). The seeder sync request only persists in the database if the correct sync request BO cannot be determined by the pre-processing algorithm.</p> <p>The seeder sync request is used on the XAI inbound service W1-SyncRequestInbound. The existence of the seeder simplifies the interface with the integration layer as the same service is invoked regardless of which master data object the sync request is for (an exception is the asset-node sync, which has its own unique schema).</p>	F1-SYNCREQIN Inbound Sync Request

Master Configurations

Master configurations are used to define aspects of the synchronization process, including resolution of foreign keys and the type of synchronization business objects to use for each type of data being synchronized. Navigate to **Admin > Master Configuration** to review or modify this information.

The table below lists the master configurations used in data synchronization processing.

Master Configuration	Description
Master Data Synchronization Configuration	<p>F1-SyncCfgBO</p> <p>Lists all foreign key references that need resolution. Each one should reference the view that contains the external key / production key cross-reference. For entities that undergo both the initial and the ongoing sync, two views are specified. For entities that undergo the ongoing sync, an external system / ID type mapping is specified to cater for entities that might be synchronizing from more than one external system.</p>

Master Configuration	Description
MDM Integration Master Configuration	<p>W1-MDMIntegrationMasterConfig</p> <p>This master configuration BO contains information necessary for the integration with Oracle Utilities Meter Data Management. The external system for Oracle Utilities Meter Data Management as defined within Oracle Utilities Operational Device Management, as well as its URL are captured here. The external system contains the Outbound Message Types and their corresponding configuration for communicating with the external system. The base package includes the message XSL W1-ODMMDMRequestAddNamespace.xsl and W1-ODMMDMResponseAddNamespace.xsl. Please refer to External Systems in the user documentation for more information. The parameter that defines the length of time Oracle Utilities Operational Device Management waits for a response from Oracle Utilities Meter Data Management is also defined here. Refer to algorithm W1-EXTSYSRST for information on how this parameter is used.</p>
Seeder Sync Request Master Configuration	<p>W1-SeederSyncReqMasterConfig</p> <p>This master configuration BO contains the information necessary for the seeder sync request (see W1-SyncRequestSeeder BO) to determine the correct sync request BO to create. It is keyed off of external system, MO and the value of the initialLoad indicator on the sync request (i.e., whether or not an initial or ongoing sync request is being processed). See also algorithm type W1-DETSYNRBO for details on how this information is used.</p> <p>This BO also contains the ongoing sync key reference views used by ongoing sync processing to check for the existence of a particular record prior to adding it to Oracle Utilities Operational Device Management. See also algorithm type W1-SR-PREADD for details on how this information is used.</p>
Generic BI Configuration	<p>F1-BIGeneralMasterConfig</p> <p>Contains configurations needed for interfacing with Business Intelligence.</p>

Batch Controls

Batch controls perform processing for initial synchronization requests such as allocating keys to data, resolving foreign keys, and loading data (instantiating business objects representing entities such as devices, measuring components, etc.).

“Initial Sync Request - Resolve Keys XXX” batch controls invoke a generic maintenance object transition process to invoke the “Resolve Keys - Initial Sync” algorithm for synchronization requests of the appropriate type. Parameters used by “resolve keys” batch controls include:

- **Maintenance Object:** (Required) the maintenance object (device, device configuration, etc.) to be processed. This must be set to the Sync Request maintenance object for the batch control (device for device synchronization requests, service point for service point synchronization requests, etc.)

- **Restrict By Batch Code:** Restricts processing to synchronization requests whose current state is linked to this batch code.
- **Restrict By Business Object:** Restricts processing to synchronization requests linked to this business object.
- **Restrict By Status Code:** Restricts processing to synchronization requests of this status (default: KEY_ALLOCATD).
- **Max Errors:** Specifies the maximum number of errors allowed before the process exits.

“Initial Sync Request - Load Data XXX” batch controls load data (created new instances of business objects) for requests of the appropriate type (device, measuring component, etc.). Parameters used by “load data” batch controls include:

- **Maintenance Object:** (Required) the maintenance object (device, device configuration, etc.) to be processed. This must be set to the Sync Request maintenance object for the batch control (device for device synchronization requests, service point for service point synchronization requests, etc.)
- **Restrict By Batch Code:** Restricts processing to synchronization requests whose current state is linked to this batch code.
- **Restrict By Business Object:** Restricts processing to synchronization requests linked to this business object.
- **Max Errors:** Specifies the maximum number of errors allowed before the process exits.
- Refer to [Appendix A: Batch Controls](#) for a list of these synchronization batch controls.

Batch Scheduling

The following sequence indicates the order in which the batch controls on the Initial Sync Request BO life cycle should be executed.

1. Transformation / Schema Validation Job
2. Key Allocation Job
3. Foreign Key Resolution / BO Validation Job (dependent on ALL Key Allocation Jobs finishing)
4. Load Job

XAI Inbound Services

XAI inbound services are used to facilitate invoking the Sync Request Seeder business object by the middleware components upon receipt of a synchronization request.

The table below lists the pre-configured XAI Inbound Services used to process synchronization requests sent from Oracle Utilities Customer Care and Billing.

XAI Inbound Service	Description	Schema Name
W1-CompnCriteriaActGenerator	Component Criteria Activity Generator	W1-CompnCriteriaActGenerator
W1-SyncRequestInbound	Sync Request Inbound	W1-SyncRequestSeeder

Understanding Synchronization Request Processing

This section provides an overview of the processing that takes place when a synchronization request is sent. For each step in the process, the table below provides a brief description of the processing that takes place, and lists the specific objects involved.

Step	Process	Objects
1.	The external system sends a synchronization request to the middleware integration layer. For example, consider a request to update information about an asset installation.	
2.	The middleware components transform the request from the external system to the format, to the format used by Oracle Utilities Operational Device Management (this format is based on the business object schemas of the synchronization request business objects).	
3.	The middleware component invoked the appropriate XAI Inbound Service, and sends the transformed request.	XAI Inbound Service: W1-SyncRequestInbound (mapped to the W1-SyncRequestSeeder business object)
4.	The XAI Inbound Service invokes the Sync Request Seeder business object, which in turn, determines which synchronization request business object to create (based on the type of data in the synchronization request and the Seeder Sync Master Configuration).	Synchronization Request BO: W1-SyncRequestSeeder
5.	For initial synchronization requests, background processing creates master data for each synchronization request, including the following steps: <ul style="list-style-type: none"> • Data Transformation / Schema Validation • Allocate Keys • Resolve Foreign Keys / Validate Business Object • Load Data 	

Integrating with Oracle Utilities Meter Data Management

The Oracle Utilities Operational Device Management integration with Oracle Utilities Meter Data Management is referred to as the “Oracle Utilities Integration for Device Operations”. This integration is focused on the following key areas:

- Asset - Device synchronization
- SP - Location synchronization
- Contact synchronization
- Install Event - Asset Location synchronization

Please refer to the *Oracle Utilities Integration for Device Operations Implementation Guide* for details on the integration and configuration guidelines.

Appendix A

Batch Controls

This appendix describes the base package batch processes. Use the **Batch Control** portal and **Application Viewer** for more details about these batch processes.

About Monitors

The main batch controls that might require configuration are the monitors. Monitors determine when an event has taken place within the system and they trigger another event in response. These may or may not require modification to the interval, or frequency of doing a status check on events and launching triggers.

As a general rule, all monitors are executed the first time an entity enters a given state. After that event, the system relies upon the batch process configuration to determine when the process is called again.

Non-Timed Monitors

Monitor type batch controls can be configured with no defined timer interval so that they can be run whenever required. Typically, organizations that use a third-party software to manage monitoring and batch triggers would configure monitors in this way.

Timed Monitors

Monitor type batch controls that do not have third-party software to trigger the processes can use the simple processing in base package batch controls to launch the batches at whatever time interval is set as the timer interval.

Synchronization Requests

Monitors used for data synchronization load data for requests of the type indicated by the description or they invoke a maintenance object transition process.

Base Package Batch Controls

This section lists the batch controls that are provided in the base package. These are all untimed monitors.

Batch	Description
W1-ACT	Activity MO Periodic Monitor Process

Batch	Description
W1-ASSET	Asset Monitor
W1-CEVT	Completion Event MO Periodic Monitor Process
W1-COMIN	Communication Inbound MO Periodic Monitor Process
W1-SIIR	Initial Sync Request - Error
W1-SIKAN	Initial Sync Req - Resolve Keys Asset-Node
W1-SIKCN	Initial Sync Request-Resolve Keys Contact
W1-SIKSP	Initial Sync Request - Resolve Keys SP
W1-SILAN	Initial Sync Request-Load Data Asset-Node
W1-SILCN	Initial Sync Request - Load Data Contact
W1-SILDD	Initial Sync Request - Loaded
W1-SILSP	Initial Sync Request - Load Data SP
W1-SIOER	Ongoing Sync Request - Error
W1-SIOPE	Ongoing Sync Request - Pending
W1-SRSER	Sync Request Seeder - Error
W1-SSWO	Service Schedule WO MO Periodic Monitor Process
W1-SVHST	Service History MO Periodic Monitor Process
W1-SYRQI	Inbound Sync Request MO Monitor Process
W1-WO	Work Order MO Periodic Monitor Process

Index

A

Address Geocoding algorithm 3-2

B

base time zone 3-2

batch controls A-1

Business Objects

- W1-ActivityCompletionEventType 3-23
- W1-ActivityComplInboundComm 3-11
- W1-ActivityGenerator 3-20
- W1-ActivityTypeBundlingAddBO 3-21
- W1-ActivityTypePhysicalBO 3-21
- W1-AdHocActivityCore 3-5
- W1-AssetCompletionEventType 3-23
- W1-AssetCriteriaActGenerator 3-20
- W1-AssetDisposition 3-7
- W1-AssetDispositionHistory 3-7
- W1-AssetDposCmpEvtType 3-23
- W1-AssetDposHistInStoreMvmnts 3-7
- W1-AssetListActGenerator 3-20
- W1-AssetLite 3-7
- W1-AssetLocation 3-15
- W1-AssetLocationType 3-27
- W1-AssetReplicationActivity 3-5
- W1-AssetReplicationComplEvent 3-9
- W1-AssetType 3-22
- W1-AssetTypeBundlingAddBo 3-22
- W1-AssetTypePhysicalBO 3-22
- W1-BasicActivityType 3-21
- W1-BasicWorkOrder 3-20
- W1-Business 3-13
- W1-CommTypeBundlingAddBO 3-25
- W1-CommunicationTypePhysicalBO 3-25
- W1-CompletionEventRoot 3-9
- W1-ComplEventTypeBundlingAddBO 3-23
- W1-ComplEventTypePhysicalBO 3-24
- W1-CompnAssetListActGenerator 3-20
- W1-CompnCriteriaActGenerator 3-20
- W1-ComponentType 3-22
- W1-ContactType 3-26
- W1-ContactTypeBundlingAddBO 3-26
- W1-ContactTypePhysicalBO 3-26
- W1-CreActivityPayCmpEvt 3-9
- W1-CreAssetAttachCmpEvt 3-9
- W1-CreAssetPayCmpEvt 3-9

- W1-CreateActivityInboundComm 3-11
- W1-CreComActivityInboundComm 3-11
- W1-CreNodeAttachCmpEvt 3-9
- W1-CreServiceHistoryAttCmpEvt 3-9
- W1-CreServiceHistoryPayCmpEvt 3-9
- W1-DataAreaCmpEvtType 3-23
- W1-GeneralCommunicationType 3-25
- W1-GeneralCompletionEventType 3-23
- W1-InboundCommunicationRoot 3-11
- W1-InitialSyncRequestAsset 4-2
- W1-InitialSyncRequestContact 4-3
- W1-InitialSyncRequestLocation 4-3
- W1-InOutSvcAsset 3-7
- W1-InOutSvcComponent 3-7
- W1-LocalActivityCore 3-5
- W1-Manufacturer 3-14
- W1-ManufacturerBundlingAddBO 3-14
- W1-ManufacturerPhysicalBO 3-14
- W1-MDMAssetSyncReqOutMsg 4-3
- W1-MDMAssetSyncRequest 4-3
- W1-MDMIntegrationMasterConfig 4-7
- W1-NdAsAttToAsOutboundMessage 3-16
- W1-NodeCriteriaActGenerator 3-20
- W1-NodeLite 3-15
- W1-NodeTypeBundlingAddBO 3-27
- W1-NodeTypePhysicalBO 3-27
- W1-OngoingSyncRequestAssetNode 4-4
- W1-OngoingSyncRequestContact 4-5
- W1-OngoingSyncRequestLocation 4-5
- W1-Organization 3-15
- W1-OrganizationType 3-27
- W1-OutboundAcknowledgeMessage 4-6
- W1-OutboundActivityCore 3-5
- W1-OutboundActivityType 3-21
- W1-PeerSpecification 3-18
- W1-Person 3-13
- W1-ReplicationComplEventType 3-24
- W1-ScheduledActivityType 3-21
- W1-SeederSyncReqMasterConfig 4-6, 4-7
- W1-ServiceHistory 3-19
- W1-ServiceHistoryType 3-28
- W1-ServiceHistTypeCmpEvtType 3-24
- W1-Specification 3-18
- W1-SpecificationBundlingAddBO 3-18
- W1-SpecificationPhysicalBO 3-18
- W1-StorageLocation 3-15

W1-StorageLocationType 3-27
W1-SvcHstTypeBundlingAddBO 3-28
W1-SvcHstTypePhysicalBO 3-28
W1-SynchronizationAddContact 3-13
W1-SyncRequestSeeder 4-6
W1-TrackedAsset 3-7
W1-TrackedComponent 3-7
W1-TrnAssetCmpEvent 3-9
W1-UpdAssetPayCmpEvt 3-9
W1-UpdNodePayCmpEvt 3-9
W2-CommunicationComponent 3-8
W2-CommunicationComponentCfg 3-33
W2-CommunicationComponentSpec 3-18
W2-CommunicationRelay 3-8
W2-CommunicationRelaySpec 3-18
W2-FirmwareSpecification 3-18
W2-Key 3-33
W2-ManualMeter 3-8
W2-ManualMeterConfiguration 3-33
W2-ManualMeterSpecification 3-18
W2-ServicePoint 3-16
W2-ServicePointInstruction 3-33
W2-ServicePointWarning 3-33
W2-SiteLocation 3-33
W2-SmartMeter 3-8
W2-SmartMeterConfiguration 3-33
W2-SmartMeterSpecification 3-18
W2-SynchronizationAddSP 3-16
W2-Vehicle 3-16

D

Data Areas 3-29
demonstration environment 1-4

F

feature configuration 3-1

I

Installation Options 3-1

L

legal time zone 3-2

M

Maintenance Objects

F1-OUTMSG 3-16
W1-ACT 3-5
W1-ACTTY 3-21
W1-ASSET 3-7
W1-AssetDisposition 3-33
W1-ASSETTYPE 3-22
W1-CEVT 3-9
W1-CEVTIT 3-23
W1-COMIN 3-11
W1-COMTY 3-25
W1-CONTACT 3-13
W1-CONTITYPE 3-26
W1-MANUF 3-14
W1-NODE 3-15
W1-NODETYPE 3-27
W1-SPEC 3-17
W1-SVCHST 3-19
W1-SVCHSTTY 3-28
W1-WORKORDER 3-20

monitors A-1

N

naming conventions 1-4

O

Operational Device Management Overview 3-1
Overview 1-1

R

Resource Scheduling and Planning 1-2

S

setup sequence 2-1
SMS Receive algorithm 3-3
SMS Send algorithm 3-3

T

time zones 3-2
tools 1-2