Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service

User's Guide

Release 24C

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Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service User's Guide, Release 24C

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Preface

Welcome to the Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service User's Guide for release 24C.

This user's guide includes the information required for the integration to work effectively. It describes how to use the features in Oracle Utilities Work and Asset Cloud Service. It provides instructions for completing common tasks and provides descriptions of the fields, windows, buttons, and menus used to perform those tasks. The instructions and descriptions in this guide are based on the default product configuration for a user with full authority to use all functionality.

> **Note:** The screenshots and images provided in this document are sample references based on the current release of Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service. They may change based on changes to UI in the future releases.

The preface includes the following:

Audience

This document is intended for anyone implementing the integration between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service.

Documentation and Resources

For more information regarding this integration, foundation technology and the edge applications, refer to the following documents:

Product Documentation

Resource	Location
Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service documentation	https://docs.oracle.com/en/industries/energy-water/integrations-index.html
Oracle Utilities Work and Asset Cloud Service documentation	https://docs.oracle.com/en/industries/energy-water/work-asset-cloud-service/index.html
Oracle Field Service documentation	https://docs.oracle.com/en/cloud/saas/field-service/index.html

Additional Documentation

Resource	Location
Oracle Integration Cloud Service documentation	Refer to the OIC documentation at: https://docs.oracle.com/en/cloud/paas/integration-cloud/index.html
Oracle Support	Visit My Oracle Support at https://support.oracle.com regularly to stay informed about updates and patches. Refer to the *Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1)* on My Oracle Support to determine if support for newer versions of the listed products is included. For more information, refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm
Oracle University for training opportunities	https://education.oracle.com/

Updates to Documentation

The complete Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service documentation set is available from Oracle Help Center at https://docs.oracle.com/en/industries/energy-water/index.html.

Visit My Oracle Support for additional and updated information about the product.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support for the hearing impaired. Visit: http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs

Conventions

The following text conventions are used in this document:

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

Acronyms

The following terms are used in this document:

Term	Expanded Form
DVM	Domain Value Map (Lookup)
OIC	Oracle Integration Cloud
OFS/OFSC	Oracle Field Service
OUWACS/WACS	Oracle Utilities Work and Asset Cloud Service
OUWAM/WAM	Oracle Utilities Work and Asset Management

Chapter 1

Overview

This chapter provides an overview about Oracle Utilities Work and Asset Cloud Service, Oracle Field Service, and Oracle Integration Cloud. It focuses on the functionality and business standpoint of each part and in the integration.

The chapter provides detailed information about the following:

- Background
- Integration Overview

Background

The pandemic has forced utilities to rethink their digital transformation strategy to meet ever-changing customer expectations.

No other industry has placed the same level of burden on its operations personnel, as the utility industry has. Utilities around the world continue to navigate disruption - from new asset types across a smarter grid, to record breaking weather events. Layer in unpredictable hurdles, like keeping crews safe amidst a pandemic, and meeting increasingly challenging regulatory and financial demand, and its clear utility operations personnel are under growing pressure to adapt and perform under increasingly extreme conditions.

Customer expectations are higher than ever now with real-time access to services being the norm (food delivery, parcel services, ride sharing, and so on). Utilities need to keep their customers informed on appointments and other crew activity, and across the board need to be as efficient as possible getting their crews to their jobs throughout the day. Extreme weather events continue increase in both frequency and magnitude, so utilities need to adapt operations accordingly. During, and after, any large outage scenario, such as an extreme weather event, it is critical to be able to adapt quickly, have total visibility of your crews, and get them to the right location fast to restore service for your customers.

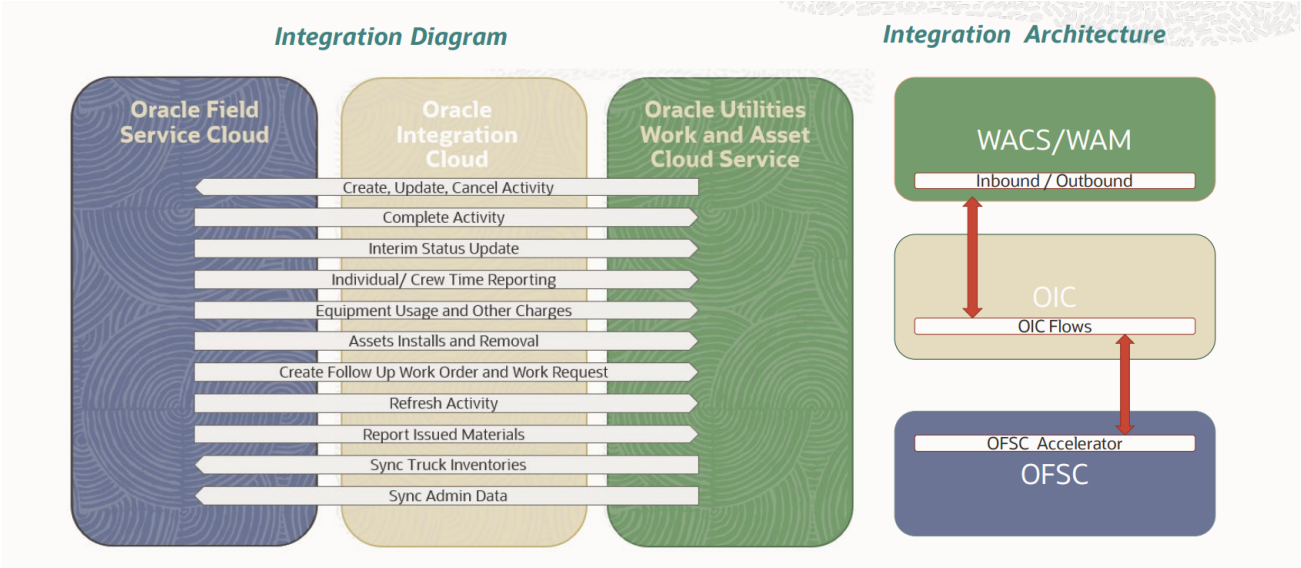
Legacy providers and legacy systems that simply were not designed for today's complexities, have left utilities to address these challenges in silos. Data sets become isolated, processes become disconnected, and cost overruns become a certainty, with utility operations left even further behind.

Our out-of-the-box integrated solution between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service addresses these challenges by providing advanced activity and crew management, comprehensive collaboration, and other tools for efficient utility operations.

Integration Overview

Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service helps to manage a fieldwork originated in the Oracle Utilities Work and Asset Cloud Service solution in Oracle Field Service. The integration can be leveraged to create /update/ cancel and complete activities in the field using the Oracle Field Service solution.

The major business flows revolve around activities and usage reporting. The activities are created in Oracle Utilities Work and Asset Cloud Service and sent to Oracle Field Service for the mobile worker to perform the activity. The field activity completion information is sent from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service. In addition, the integration supports admin sync from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service.



The three major components in this implementation are:

- Oracle Utilities Work and Asset Cloud Service (WACS)
- Oracle Field Service (OFS)
- Oracle Integration Cloud (OIC)

Oracle Utilities Work and Asset Cloud Service (WACS)

Oracle Utilities Work and Asset Cloud Service efficiently manages asset lifecycles, streamlines maintenance operations, maximizes supply chain performance, enhances safety, and improves regulatory compliance.

Oracle Field Service (OFS)

Oracle Field Service is built on time-based, self-learning, and predictive technology, empowering to solve business problems while evolving the field service organization. It has various modules to choose, such as forecasting, routing, capacity, mobility, collaboration, core manage, smart location, customer communication, and more. It leverages the performance pattern profiles to create optimal daily routes and schedules and continues to learn as employee work patterns change over time.

The Oracle Field Service functionality is based on user privileges to support the business case. There are two primary types of users:

- Users who use the manage aspect, for example, dispatchers and field managers.
- Field service resources who use the mobile application. Example: field service personnel

The screens are different for administrator, dispatcher, crew, and so on. For more information, refer to Additional Information - Integration Concepts.

Oracle Integration Cloud (OIC)

Oracle Integration Cloud is a business accelerator package with pre-build interactions to facilitate Oracle Utilities Work and Asset Cloud Service and Oracle Field Service communications.

Oracle Integration Cloud ensures that the Oracle Utilities Work and Asset Cloud Service requests are being forwarded to Oracle Field Service and vice versa. Oracle Utilities Work and Asset Cloud Service are sending direct requests when the operator makes changes on the user interface. On the other hand, Oracle Field Service is an event-based applications and Oracle Integration Cloud is listening to incoming event changes.

To implement certain business logic, Oracle Integration Cloud is using properties stored configuration files named lookups to:

- Translate Oracle Utilities Work and Asset Cloud Service into Oracle Field Service understandable values
- Preset default values
- Pre-defined field names

Chapter 2

Supported Features

Oracle Utilities Work and Asset Cloud Service integration to Oracle Field Service helps to manage a fieldwork originated in Oracle Utilities Work and Asset Cloud Service using Oracle Field Service. This pre-built integration represents significant business value for utilities that need to manage their field operations.

For more information about the functionality, refer to the *Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Configuration Guide* included in this release. The documentation is available on Oracle Help Center at: https://docs.oracle.com/en/industries/energy-water/integrations-index.html

The following topics are included in this chapter:

Business Terms

The following terms are used throughout this document:

Business Term	Description
Activities	Work activities are work tasks that need to be completed and originate from a work order or a work order template. As examples, activities may be created for maintenance and inspection of assets, to create service history, and to install or exchange devices.
Asset	An asset describes such objects as meters, poles, pipes, transformers, components, or any other material item owned or managed by an organization.
Asset Attribute	Asset Attributes are characteristic that are recorded for an asset. Each asset type records which characteristic types can be used for asset attributes for assets of that types.
Asset Location	The physical location where the asset is installed. Some examples of asset locations are service points, underground connections, poles, and so on.
Buckets	Use organization units to sort and organize the items in the Resource Tree. Buckets hold the activities that are not yet assigned to the field resources.
Component	Components are devices or other objects that are attached to an asset.
Control Zones	Discrete, hierarchical sections of a utility's distribution system. The control zone configuration requires defining zones, assigning devices to zones and, optionally, creating zone sets (or groups) that assist in assigning crews to multiple zones and to filter crews.
Crews	A collection of one or more resources in Oracle Field Service and can include field resources, vehicles, and so on.
Inventory	Inventory is tracked, ordered, and received from vendors and allocated in the inventory system. As inventory is allocated to work, the system passes this information back to the work management system so that maintenance managers and crews know that their parts are available.
Organization Units	Organization units are typically used to group resources by location. They cannot be route owners and you cannot assign activities to them. Buckets can have activities. However, dispatchers can assign activities to buckets manually and routing can assign activities to buckets automatically.

Business Term	Description
Stock Item	Stock items are defined as material resources that are held in storerooms and issued to activities that require the materials to be completed. The stock item record determines whether or not the type of stock can be purchased, repaired, tracked, and so on.
Storeroom	Storerooms define the physical location where stock items are stored.
Work Orders	Work orders group similar activities and are used to manage activities to perform any kind of work such as inspection, install, replacement, upgrade, and so on. They are mainly used to facilitate approval processing for work projects. Work orders might also be created to manage a set of activities where the activities are manually linked to the work order.
Work Skills	The job-specific skills necessary to perform an activity. These act as a defining criteria to match activities with the resources.
Work Queues	A queue is the collection of activities that are assigned and can be in different states of completion. Each workday the crew will activate, deactivate its queue according to its works schedule.
Work Zones	The defined geographical area within which a resource can perform activities. Work zones are defined within the work zone dictionary, and are then assigned to resource records.

Business Flows

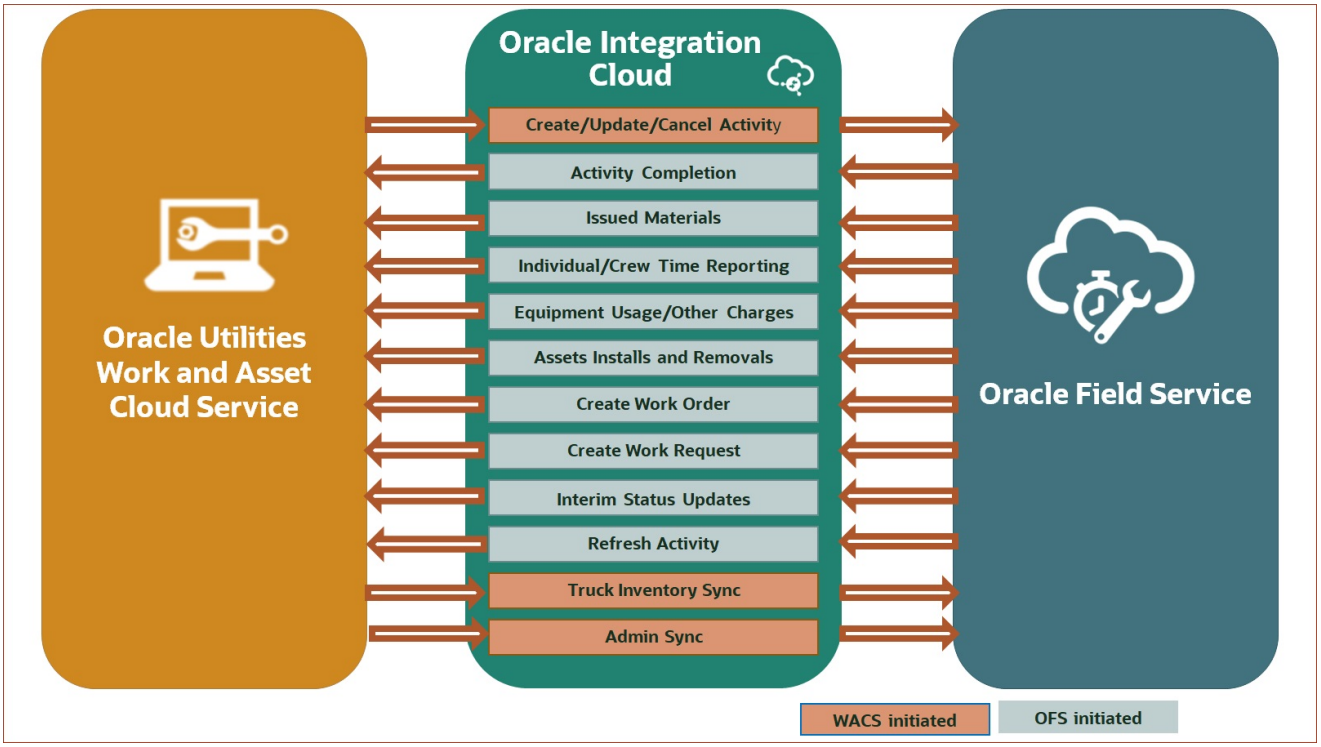
This integration supports the following business flows:

- Mobile Control Data Sync (Oracle Utilities Work and Asset Cloud Service Initiated)
- Process Activity (Oracle Utilities Work and Asset Cloud Service initiated)
- Activity Completion (Oracle Field Service initiated)
- Resource Usage (Oracle Field Service initiated)
- Interim Status Updates (Oracle Field Service initiated)
- Asset Installs and Removals (Oracle Field Service initiated)
- Pickup Order (Oracle Field Service initiated)
- Truck Storeroom Admin Sync (Oracle Utilities Work and Asset Cloud Service initiated)
- Truck Storeroom Inventory Snapshot Sync/Update (Oracle Field Service initiated)
    - Oracle Utilities OFSC WACS Route Activation

- Oracle Utilities OFSC WACS Storeroom Sync
- Oracle Utilities WACS OFSC Schedule Storeroom Sync

- Activity Pull Update (Oracle Field Service initiated)

The following diagram illustrates the business processes supported in this integration:



Business Processes

This integration supports the following business processes:

- Administration Sync
- Activity Management
- Asset Management
- Asset Attribute Details
- Asset History Details
- Pick Up Work
- Resource Usage Management
- Status Updates
- Truck Storeroom Management

Administration Sync

This feature is used to synchronize the control data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service. It also creates the work skill related configurations needed in Oracle Field Service to match activities with resources and for crew tracking. An integration process is run on initial installation or on a need only basis when new control data from Oracle Utilities Work and Asset Cloud Service or work skill related configurations needs to be created or updated in Oracle Field Service.

Activity Management

This feature accepts the send data request from Oracle Utilities Work and Asset Cloud Service and sends status updates from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service. The following activity updates are supported in this flow:

- Activity Created
- Activity Updated
- Activity Cancelled
- Activity Completed

When activity is created, updated, or cancelled, Oracle Utilities Work and Asset Cloud Service sends the activity details message to Oracle Field Service, which also includes the list of issued assets and attachments if any. The information is sent synchronously from Oracle Utilities Work and Asset Cloud Service, regardless of the activity type, and Oracle Field Service sends back a response.

When activity is completed, Oracle Field Service sends the activity completion details, material usage details, service history details, attachment details attached at both activity and asset level along with the completion status, to complete the activity in Oracle Utilities Work and Asset Cloud Service.

Additionally, Oracle Field Service can send an "Activity Update" request to Oracle Utilities Work and Asset Cloud Service and this request can be initiated by the crew from Oracle Field Service to pull the latest activity details including issued assets for which a material request was issued on the activity in Oracle Utilities Work and Asset Cloud Service.

Asset Management

This feature is used to perform various asset operations from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service. Oracle Field Service sends the details either before the completion or after the completion of the activity.

These operations can be performed on Assets and Components using the "Asset Query Integration flow".

- Install Asset
- Attach Component
- Replace Asset
- Replace Component

Oracle Field Service sends the Asset Query details which include Asset ID, Badge Number, and location ID to Oracle Utilities Work and Asset Cloud Service. Oracle

Utilities Work and Asset Cloud Service responds with all the asset details if the call is successful, else it responds with an error message.

There are 3 inventory pools in Oracle Field Service in which assets/components are maintained based on their status:

- Installed Pool
- DeInstalled Pool
- Customer Pool

The installed asset/attached component moves to the installed pool. The replaced asset or component removed and Out of Service assets moves to the deinstalled pool. All the issued assets/components initially when not installed or removed will be in the customer pool. Also, an empty asset location with no assets installed stays in the customer pool.

The following operations can be performed on Assets and Components from Oracle Field Service, independent of the Asset Query integration process.

- Asset Removal
- Asset Out of Service
- Component Removal
- Undo Install
- Undo Remove
- Undo Attach
- Undo Replace
- Back to Service

Asset Attribute Details

This feature is used to view and display the asset attributes details of assets in existing pool, installed pool or de-installed pool including issued asset list and installed asset list.

Asset History Details

This feature is used to view and display the additional details(past work activites, service histories, and measurements) of assets in existing pool, installed pool or de-installed pool including issued asset list and installed asset list.

Pick Up Work

This feature is used to perform various operations including creation of Work Order and Work Request from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service.

Resource Usage Management

This feature is used to send the resource usage details from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service. Oracle Field Service sends the details either before the completion or after the completion of the activity.

The resource usage details that can include either the individual time sheet or crew time sheets by supervisor or equipment usage or other equipment usage to the Oracle Utilities OFSC WACS Resource Usage Details integration process deployed on Oracle Integration Cloud which further passes on the details to Oracle Utilities Work and Asset Cloud Service.

Status Updates

This feature is used to send the interim status details of the Work Activity from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service. Oracle Field Service sends the details before the completion of the activity.

Truck Storeroom Management

This feature is used to sync storeroom data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service where the storeroom type is Truck.

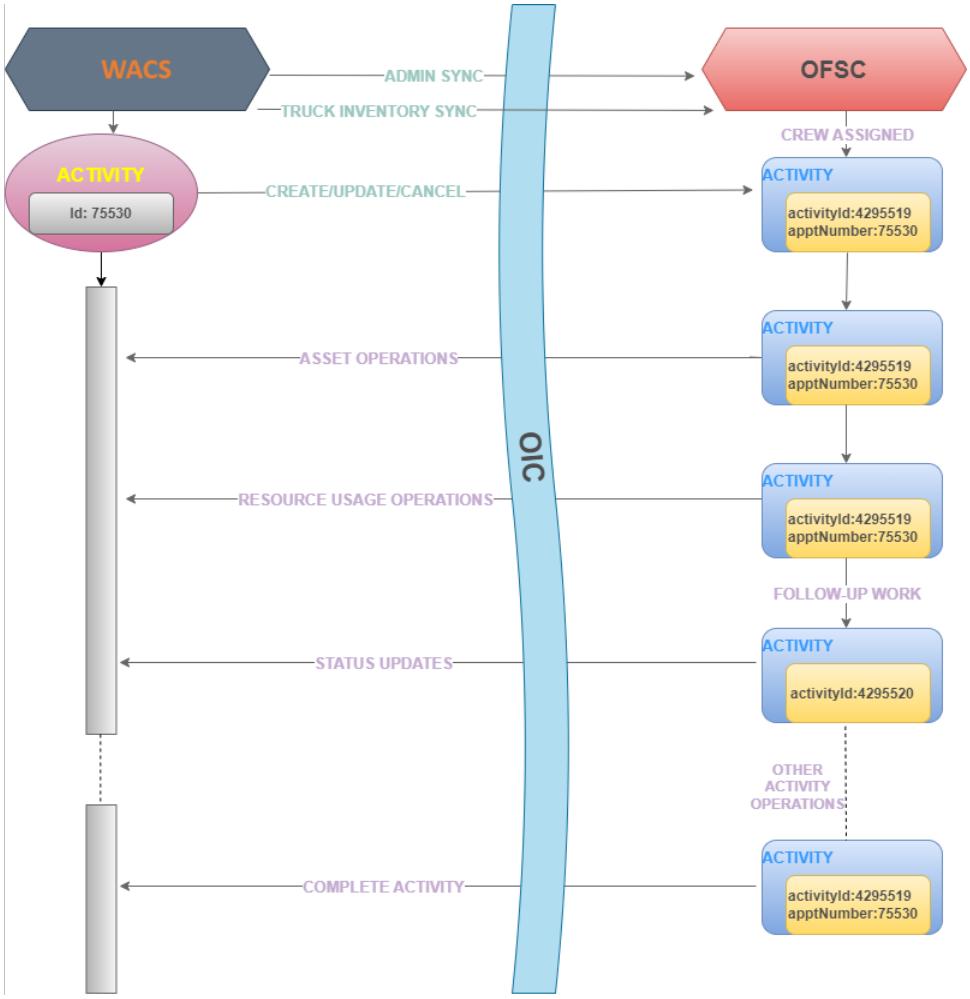
If the storeroom from Oracle Utilities Work and Asset Cloud Service does not exist in Oracle Field Service, a new record in Oracle Field Service is created. If the resource already exists, then the corresponding data in Oracle Field Service is updated. Otherwise, the respective resource's status is marked as 'inactive'.

Now, you can synchronize the inventory in each storeroom as follows:

- **Storeroom Sync on Route Activation:** On route activation of a crew or an individual, if there are any trucks associated with that crew or an individual is checked, and then the initial storeroom inventory is synchronized.
- **Scheduled Storeroom Sync:** Batch scheduled from Oracle Integration Cloud to run at a specific time of day/week/month to run snapshot synchronization of all trucks synchronized between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service.

Functional Overview

This illustrates the functionality of the business processes in this integration.



This section focuses on the functionality of the business processes in this integration.

- Activity Creation
- Activity Assigned to Crew
- Starting the Activity
- Asset/Component Operations
- Asset Attribute Details
- Asset History Details
- Resource Usage
- Service Histories
- Attachments
- Complete Activity

Activity Creation

Work activities are work tasks that need to be completed and originate from a work order or a work order template. As examples, activities may be created for maintenance and inspection of assets, to create service history, and to install or exchange devices.

Two types of work activity can be created in Oracle Utilities Work and Asset Cloud Service:

- Normal activity type
- Segmentable activity type

A multi-day activity or segmentable activity requires several days to complete. The activity is split into segments that can be managed individually while remaining parts of a single entity. Multi-day activity segments appear in the activity list on Oracle Field Service mobile home screen, and are included in sections according to their statuses.

Refer to Working with Multi-day Activities for more information.

Refer to User Operations to find more information about "Activity Creation".

Activity Assigned to Crew

For the further processing work activity which is created in Oracle Utilities Work and Asset Cloud Service is sent to Oracle Field Service default bucket configured. In return, Oracle Field Service sends a success or failure acknowledgment to Oracle Utilities Work and Asset Cloud Service. After sending outbound message from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service for each work activity ID a unique mobile activity ID is generated through which we can identify the activity in the Oracle Field Service dispatch console. The Dispatch Console is used to monitor the field and assign activities to technicians/crew based on their work skills.

In the Dispatch console, click the activity to view the **Activity Details** screen that displays the activity information, including activity type, activity duration, activity status, asset information, resources related to an activity and a location information which gives a clear picture about an activity.

The Resources assigned to the activity can be classified as:

- **Crafts:** Crafts, or labor, defines a skill or work specialty for crew members, such as mechanic, electrician, plumber, arborist, and so on. The actual number of labor hours required to work a task can be tracked using timesheets.
- **Equipment:** Equipment is another type of resource and considered to be machinery, tools, or vehicles that are required to work activities. Examples of equipment might include trucks, bulldozers, cranes, hammers, and drills. The actual number of equipment hours required for the task can be tracked using timesheets.
- **Materials:** Material is another type of resource and can be considered as the stock items required for the work. Costs are derived from the stock item when issued to the activity from a material request or from a purchase order's invoice of a direct stock item.
- **Miscellaneous Resources:** Miscellaneous or "other" resources are those resources that are not considered to be either craft, equipment, or material and which enable a crew member to work an activity. Some examples of resources that are considered "other" are meals, hotel stays, mileage, documents, attachments and so on.

Starting the Activity

After assigning the activity to the crew, the activity is presented to mobile user in read only mode in Oracle Field Service mobile screen. To make changes to the activity, enter completion information, service histories and resource usage, the crew needs to activate the route, start and lock the activity. Locking an activity guarantees that only one member of the crew can update the activity. After the work is done, unlock the activity so that other crew members can make their updates. Not all activities require the lock functionality.

There are various functionalities enabled to the crew to perform the activity.

Asset/Component Operations

A work activity is always associated with an asset or component or with an empty asset location with no assets installed.

There can be multiple assets associated with the asset location or there can be none. To additionally install an asset on the location, crew can use the install asset functionality provided in asset screen. Similarly, to attach an component to the asset crew can use the "attach component" functionality provided in asset screen. The number of assets able to be installed at a location must be valid for the asset relationship defined for the "Number of Assets Allowed" parameter on the location type.

On the Oracle Field Service Mobility screen, for each asset there is an asset/equipment details screen in which the crew can view the asset details, asset location, other assets which are associated with the same asset location and a flag which defines if the asset is working or not.

To install an asset or to attach a component crew can use the resources either from truck or from Oracle Utilities Work and Asset Cloud Service inventory by providing the badge or serial number which is assigned to the asset/component when created in Oracle Utilities Work and Asset Cloud Service. While using any asset/component/item from the truck there is no need to provide badge or serial number. To get the latest inventory in the truck, crew can use the "update truck inventory" option. This option is visible in the equipment screen only if there is a truck assigned to the crew member. But before using this feature, Oracle Field Service truck inventory needs to be in sync with Oracle Utilities Work and Asset Cloud Service, while this can be achieved by using "Sync Truck Inventories" functionality available in the Oracle Field Service **Resources Info** screen. Whereas "Refresh Activity" is used to get the latest updates on the activity or if any asset/component is issued after assigning the activity. After refreshing the activity, these issued assets and components are displayed in the "issued assets" row.

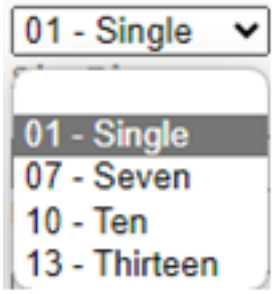
In Oracle Field Service mobile screen, crew is provided the resource usage functionality to keep track of the resources used, number of hours spent on processing the activity and other miscellaneous resources.

Asset Attribute Details

While activity creation process asset attribute details are sent from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service as part of asset details in the asset location asset list, issued asset list and installed asset list. A mobile user can view or edit the list of valid asset attributes of an asset by clicking the **Asset Attribute** button on **Asset Details** page in Oracle Field Service. Asset Attribute values are optional in Oracle

Utilities Work and Asset Cloud Service. An empty value is display in Oracle Field Service for asset attributes having no values.

There are some validations in place depending on how the asset attribute was defined in WAM, for the attributes defined as DFV or Predefined Value the valid values (WAM Characteristic Values) associated to the Asset Type (WAM Characteristic Type) will be displayed as a drop-down list:



For the ADV or Adhoc Value the validations will depend on the Asset Attribute field data type.

Number fields:

Characteristic Type	WD-WIDTH
Description	ZZ Width
Type of Char Value	Adhoc Value
Field	Critical Number
Allow Search by Value	Allowed

And the field is defined as such:

Field Name	CRITICAL_NUMBER
Data Type	Number
Field Precision	5
Field Scale	2

The Data Type Number validations for the user input are:

1. Only digits and a decimal point.
2. A number having in total five digits and can have two decimals.

   Samples: 123.12, 12345, 1.1, 0.10, and so on
3. In case the input is not valid, a message will be shown to the right side of the field.

The scale defines the decimals allowed. The precision defines the total number of digits allowed.

Varchar2 fields:

Field Name	HEIGHT
Data Type	Varchar2
Field Precision	5
Field Scale	0

The Data Type Varchar2 validations for the user input are:

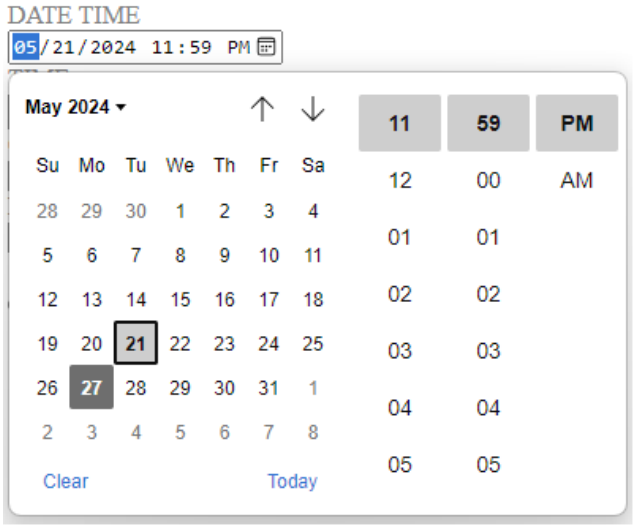
1. Alphanumeric characters.
2. The input is limited to only five characters.
3. A dynamic message will be displayed to the right side of the field indicating how many characters are left to enter or how many has been entered.

The precision defines the maximum length allowed. In case it is not defined, then it is not limited.

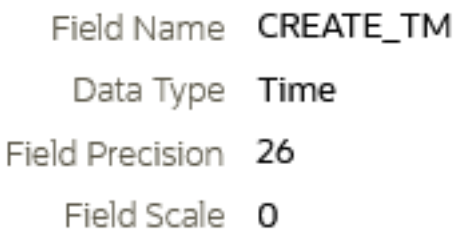
Date/Time fields:

Field Name	ACTVN_DTTM
Data Type	Date/Time
Field Precision	26
Field Scale	0

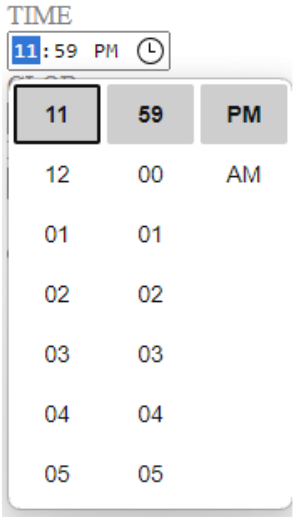
The Date/Time data type validation for user input is a date/time picker . You can select any value and also edit it directly in the field.



Time fields:



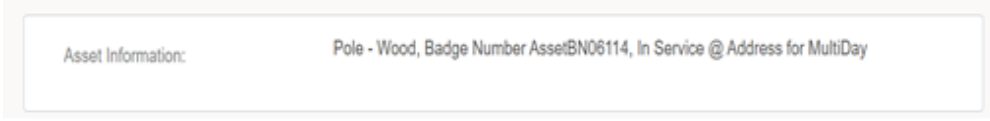
The Time data type validation for the user input is a time picker. You can select any value and also edit it directly in the field.



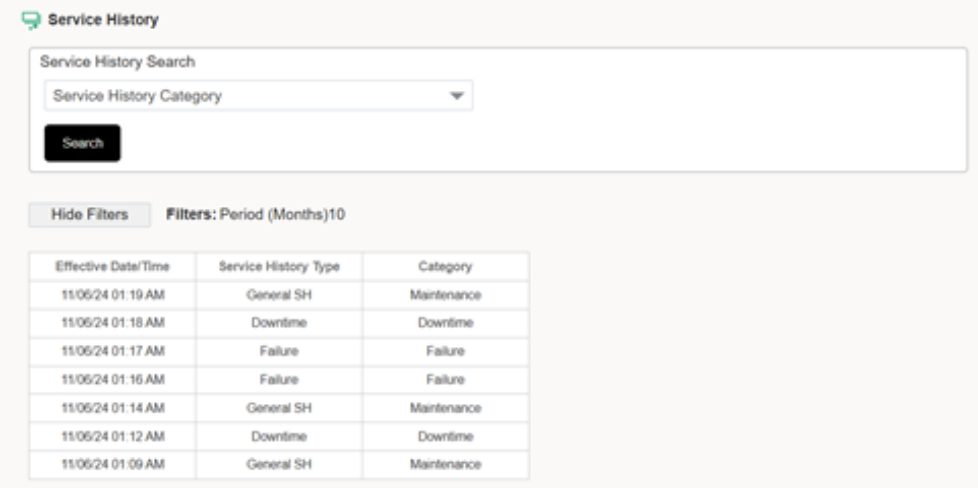
If the asset attribute is defined without using a field, it is considered as an "Open" field with no length limited accepting any character in any format.

Asset History Details

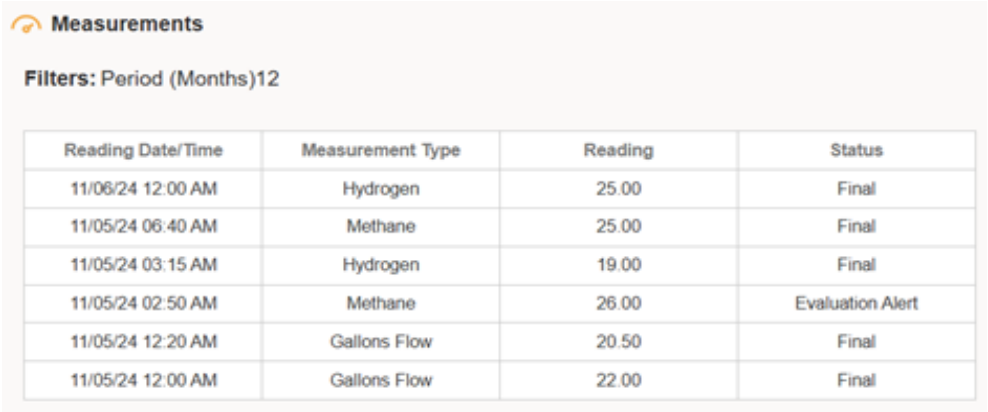
Field worker can view additional asset details (such as past activities, service histories, and measurements) on this page. The asset information is displayed at the top for which the details are populated.



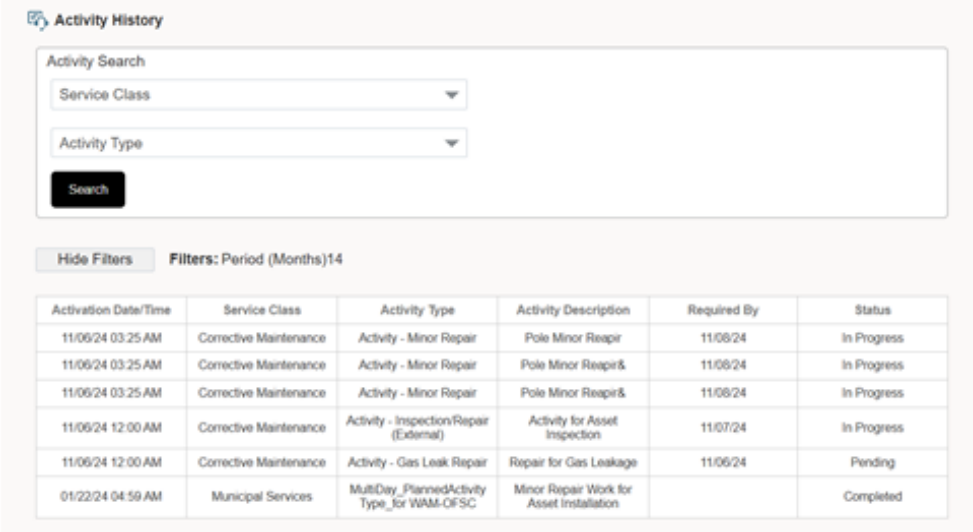
The Service History section shows the service histories of the asset. You can filter the service histories based on the **Service History Category**. Click **Expand Filters** to display the service histories satisfying the search criteria in a tabular format. Details such as **Effective Date/Time**, **Service History Type**, and **Category** are displayed.



The **Measurements** section displays the measurements history of the asset. Details such as **Reading Date/Time**, **Measurement Type**, **Reading Value**, and **Status** are displayed.



The **Activity History** section displays the activity history of the asset. You can filter the activity histories based on **Service Class** and **Activity Type**. Activity histories satisfying the search criteria are shown in a tabular format. Details such as Activation Date/Time, Service Class, Activity Type, Activity Description, Required by Date, and Status are displayed.



Resource Usage

Resource Usage is calculated under three factors:

- **Timesheets:** Crew can enter the timesheets which are used to record the amount of time that workers (labor resources) spend on activities or work orders. Once charges are entered, processing allows these workers to receive proper compensation for their work and labor charges are applied to the appropriate cost buckets.

  Note: The ability to provide timesheets is given only to certain group of crew.

- **Equipment:** Equipment is referenced on activities as a material resource requirement. The system tracks usage and reports the costing associated with that usage against the total cost of completing the activity.

- **Other Direct Charges:** Other direct charges are incurred on activities as a material resource requirement from "miscellaneous resources". The system tracks usage and reports the costing associated with that usage against the total cost of completing the activity. Along with these features crew also has the privilege to add, edit or delete service histories which is defined below:

Service Histories

Service history is used to capture and record relevant information regarding service or maintenance on assets/activity. Typically, it is used to record inspection feedback, pass/fail details, downtime, parts failure information, maintenance or service logs, or other information regarding service on the asset/activity.

Service history types linked to asset types and activity types while creating activity in WACS, control which service history can be created for assets or activity. There are dedicated service history types for each kind of service towards asset/activity.

Generally, there are two levels of service histories:

- Activity Level/Planned Service Histories
- Asset Level/Asset Service Histories

For Planned Service Histories, crew have an option to add service histories at Activity Level or at All Applicable Assets, if that particular service history type is not asset specific.

In the "Entered" section of the respective **Service Histories** page, crew can see the service history status in the Planned Service Histories the service history level for example, whether it is added at "Activity Level" or "Asset Level" additional to the service history status.

On top of the service history levels, there are 5 supported categories for service histories: Questionnaire, Inspection, Failure, Downtime and General. Each service history type has a defined business object in Oracle Utilities Work and Asset Cloud Service. Additionally customized service histories can also be created based on the requirements.

Crew can add multiple service histories at any level but crew can complete the activity only after entering all of the required service histories. If any service history type has the required flag as yes at both the levels, then crew can add it in any one of the asset or activity level.

Attachments

When crew needs to capture any images or files related to the asset/activity they can use the attachment support functionality provided both at asset and planned service histories. Crew has the privilege to add, edit and delete the attachments added at asset and activity level service histories before completing the activity. For any service history type, number of attachments at asset level and activity level together combined must be less than or equal to 15. An error pops up if tried otherwise.

Some implementations may require that attachments be available from the application for example, activity level attachments which are displayed on **Activity Details** page. These are added to the activity while creating in Oracle Utilities Work and Asset Cloud Service and are sent to the Oracle Field Service through Oracle Utilities Work and Asset Cloud Service outbound messages. Crew is permitted to only download such types of attachments but not edit or delete it at the activity level.

If crew thinks there is a need to create an additional activity to fix other issues observed while performing the existing activity in the field, then the crew can create a follow up work order request to the Oracle Utilities Work and Asset Cloud Service.

This follow up work order request is categorized into two:

- **Follow up work:** If the new identified issue is related to the asset of the existing activity then it is said to be Follow up work.
- **New Work:** If the new identified issue is not related to the existing asset, then such request is categorized as New Work. After creating the follow up work order request, a unique mobile activity ID is assigned to the new activity created and is sent to Oracle Field Service dispatch console. Based on the requirement, crew can decide if this new activity must be recorded under work order in Oracle Utilities Work and Asset Cloud Service or not. The new activity created can be assigned to the responsible crew and all other features applies like any other normal activity.

Complete Activity

After reaching the requirement of the activity crew can complete the activity. But there are some validations performed before the crew can complete the activity and these may include:

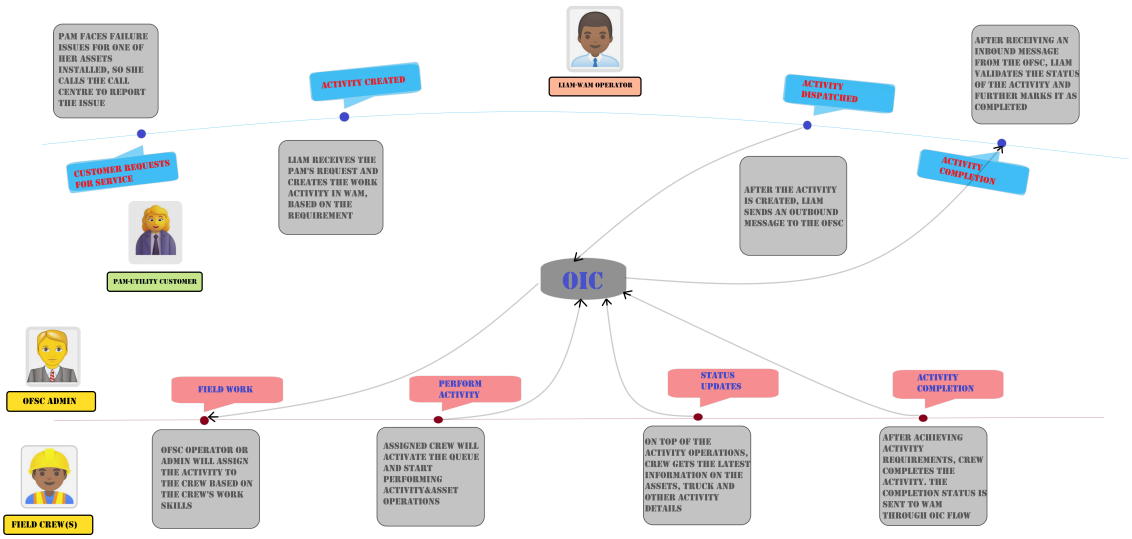
- Required service histories at both activity and asset level are entered or not.
- Saved service histories are completed or not.
- If there is an activity dependency between two activities, then their conditions are met or not.

Only after these validations are successful, crew is directed to the "End Activity" screen to complete the activity. After completing the activity, the service history details are added at both activity and asset level. Resource Usage and Attachment details are also added, as well the completion status and activity durations.

All these details are sent to Oracle Utilities Work and Asset Cloud Service which triggers completion event in Oracle Utilities Work and Asset Cloud Service. Completion events are used to capture closeout information against activities received from an external application. To confirm if an activity process is successful or not, one can check the completion event status.

Use Cases

The following scenario illustrates a mix of use cases for this integration:



User Defined Fields

In Oracle Utilities Work and Asset Cloud Service, the Work Activity schema has been extended to include user defined fields. It will allow implementers to pass additional data to Oracle Field Service and other solutions without a need to change the integration layer.

Following is the list of UDF properties available in Oracle Field Service:

- wam_activity_UDF1 to wam_activity_UDF10
- wam_activity_location_UDF1 to wam_activity_location_UDF10
- wam_asset_UDF1 to wam_asset_UDF10
- wam_asset_location_UDF1 to wam_asset_location_UDF10

Currently, Process Activity and Asset Query integrations support sending the UDF data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service.

When UDF values are populated in Oracle Utilities Work and Asset Cloud Service, they are mapped to UDF/custom properties defined in Oracle Field Service at Activity, Activity Location, Asset, and Asset Location level accordingly.

Chapter 3

User Operations

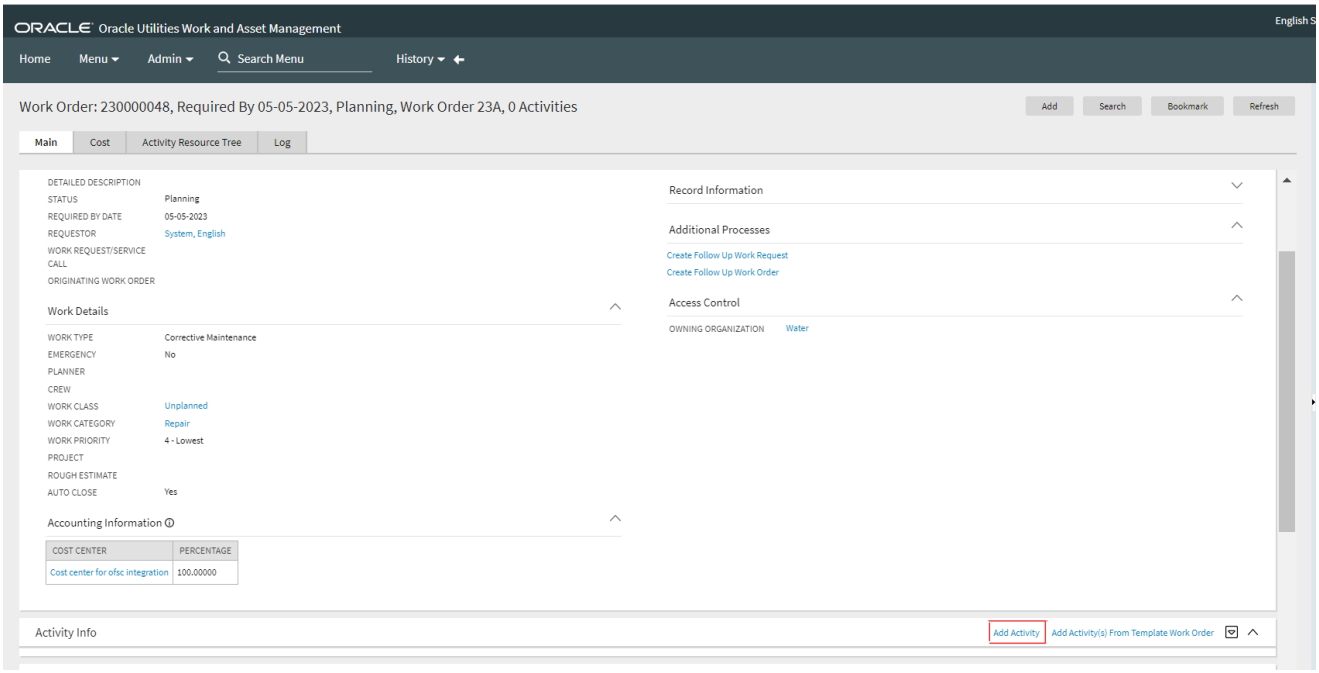
This chapter describes the various user operations and provides instructions to perform those operations. It focuses on the following:

- Creating an Activity
- Sending an Activity
- Assigning a Crew
- Starting the Activity
- Locking the Activity
- Viewing the Activity Details
- Refreshing the Activity
- Service Histories
- Measurements
- Asset Attribute
- Asset History
- Resource Usage
- Activity Completion
- Interim Completion of Construction Work Activity
- Asset Installs and Removals
- Pick Up and Follow Up Orders
- Follow Up Work Order
- Follow Up Work Request
- Mobile Inventory Management

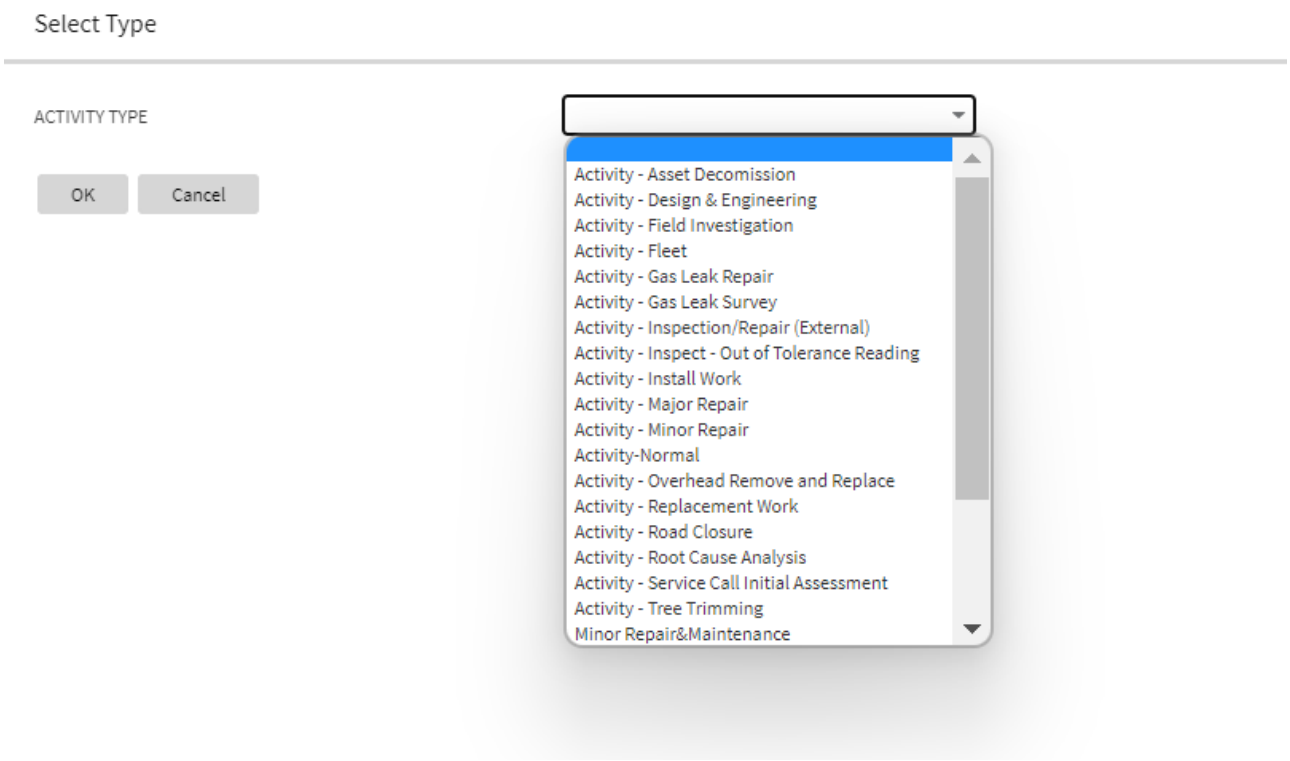
Creating an Activity

To create an activity:

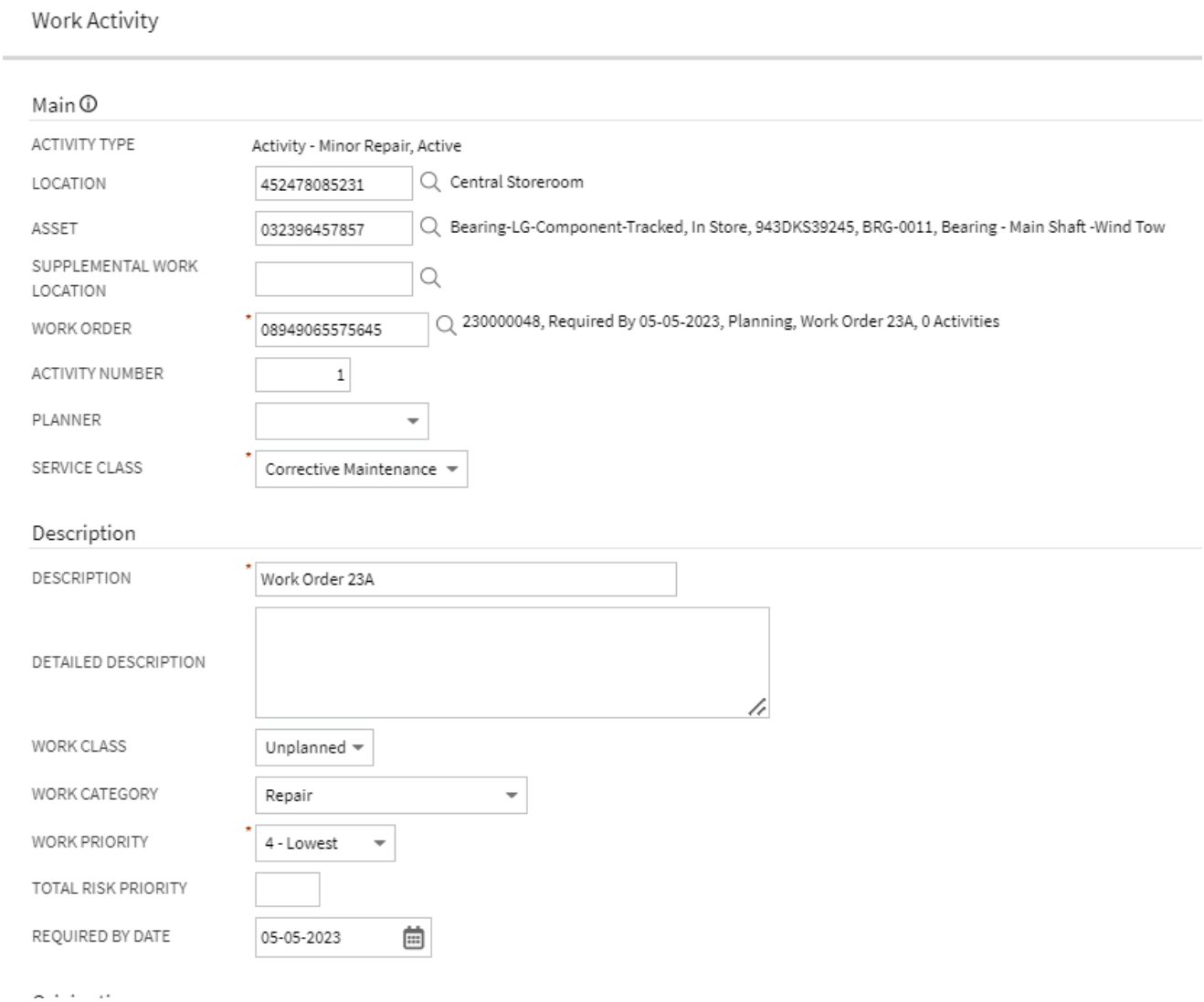
1. Login to Oracle Utilities Work and Asset Cloud Service and go to the Work Order details screen.
2. In the **Activity Info** section, click **Add Activity**.

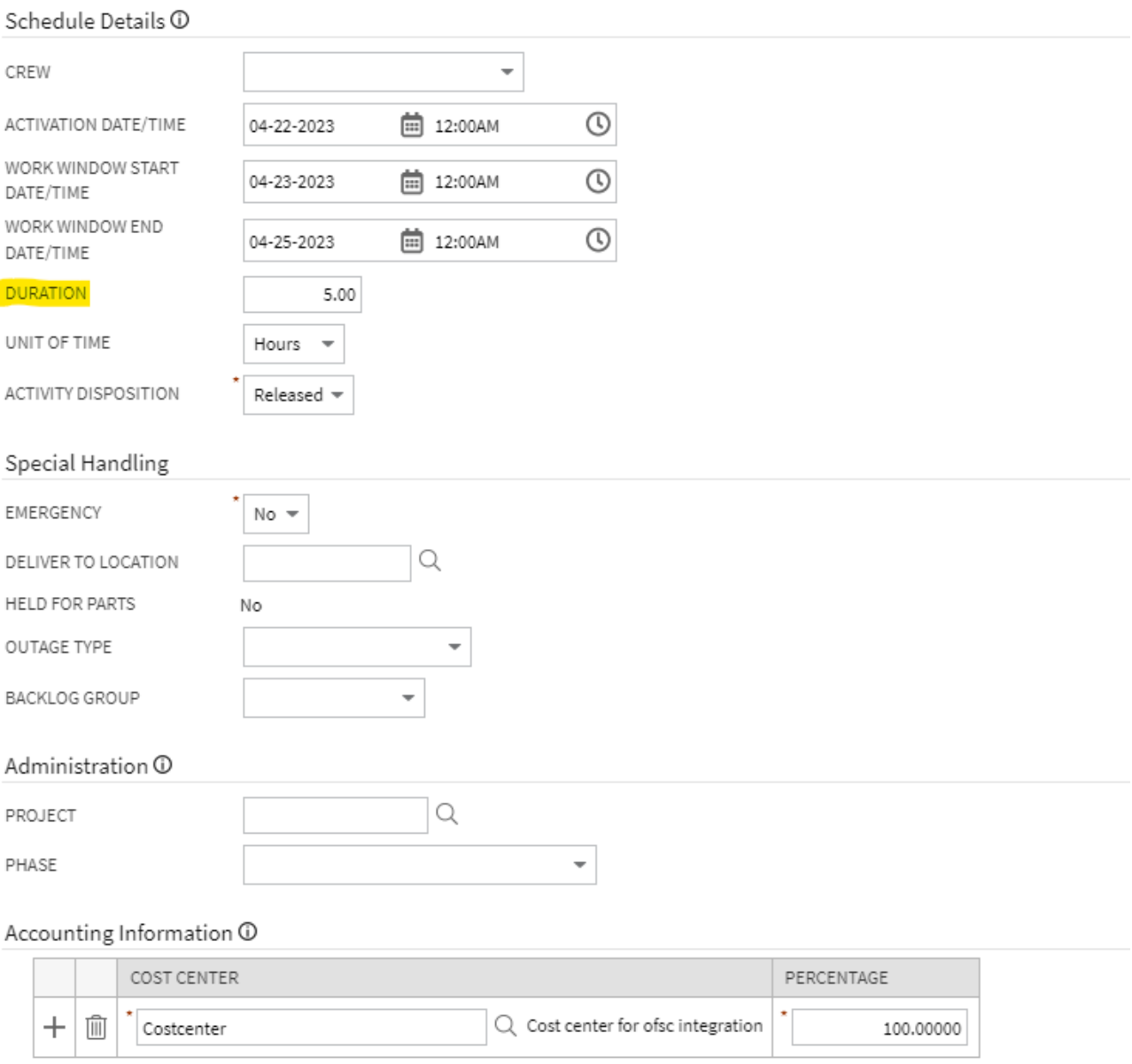


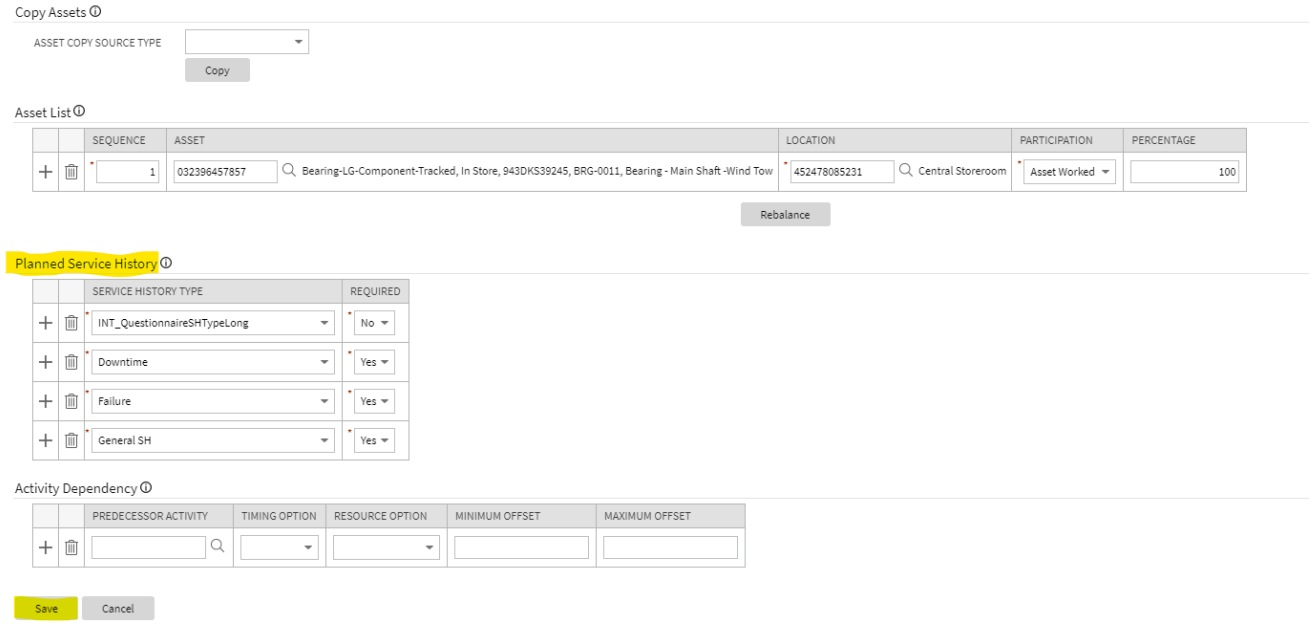
3. Select the required Activity Type and click **OK**.



4. Enter the activity details and populate all the required fields.
5. Attach at least one asset or location to the activity.
6. If **Crew Resource** is selected while creating the activity, make sure this resource is present in Oracle Field Service. If not, add this resource manually in Oracle Field Service before sending outbound for this activity.




Schedule Details
CREW
ACTIVATION DATE/TIME
04-22-2023
12:00AM
WORK WINDOW START DATE/TIME
04-23-2023
12:00AM
WORK WINDOW END DATE/TIME
04-25-2023
12:00AM
DURATION
5.00
UNIT OF TIME
Hours
ACTIVITY DISPOSITION
Released
Special Handling
EMERGENCY
No
DELIVER TO LOCATION
HELD FOR PARTS
No
OUTAGE TYPE
BACKLOG GROUP
Administration
PROJECT
PHASE
Accounting Information
COST CENTER
PERCENTAGE
Costcenter
Cost center for ofsc integration
100.00000

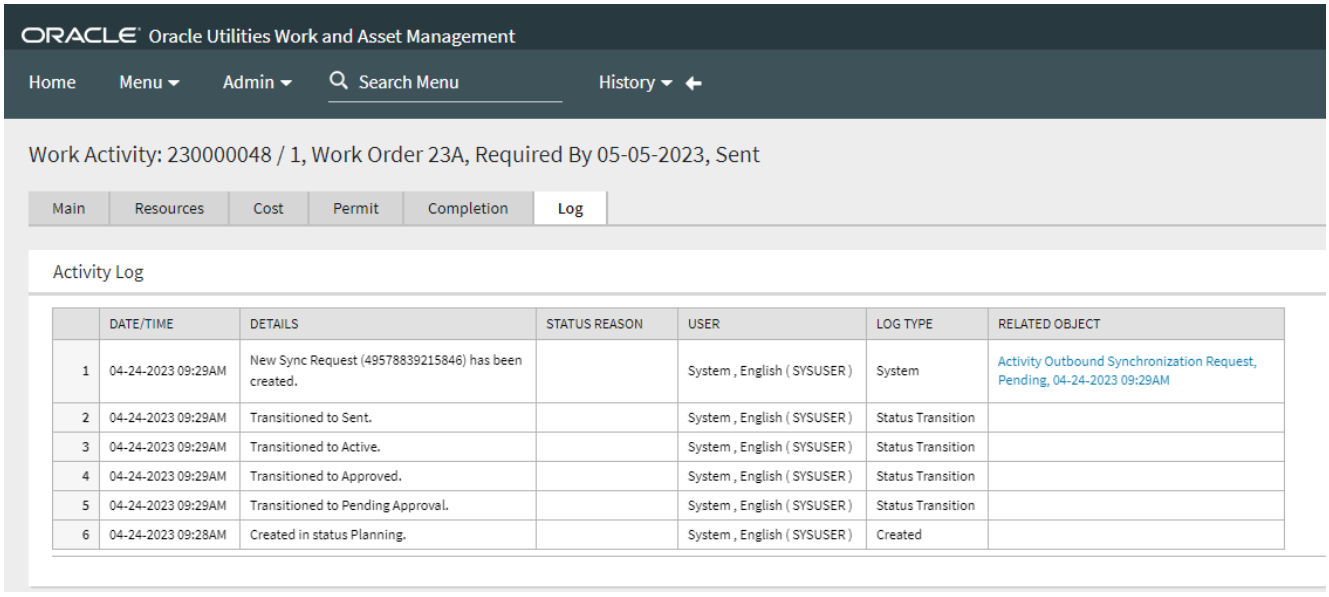


7. Click **Save** to create the activity.

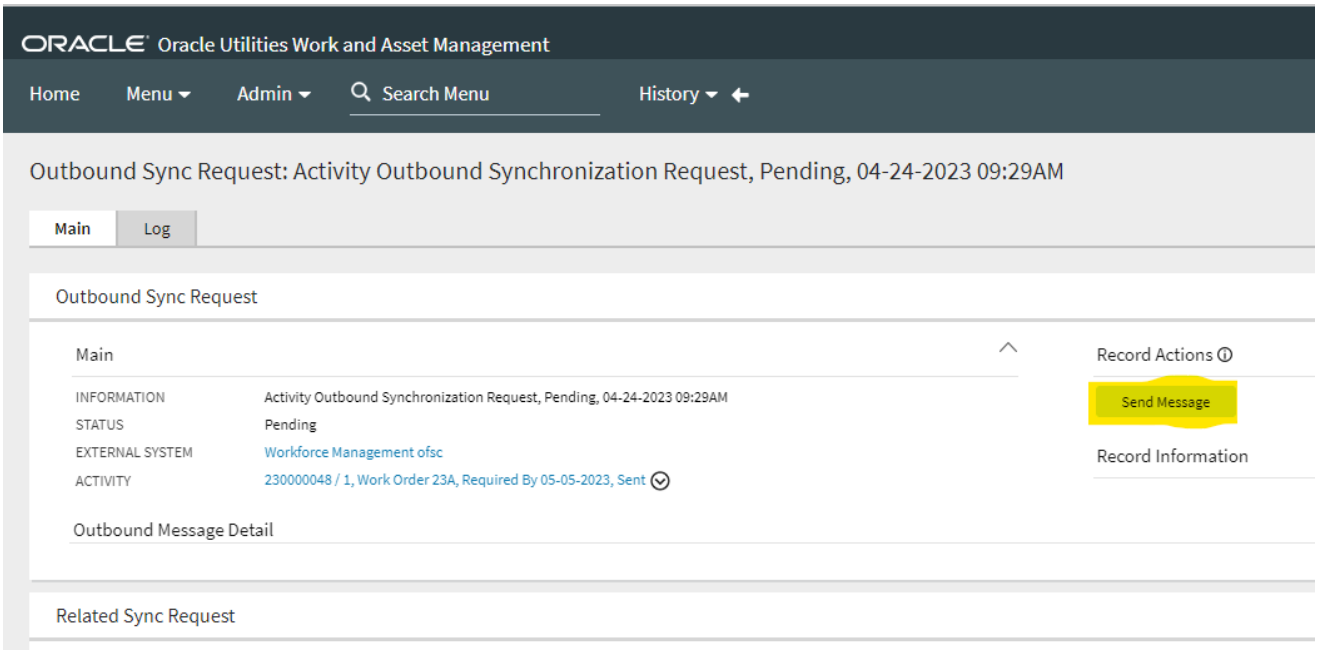
Sending an Activity

To send the activity from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service:

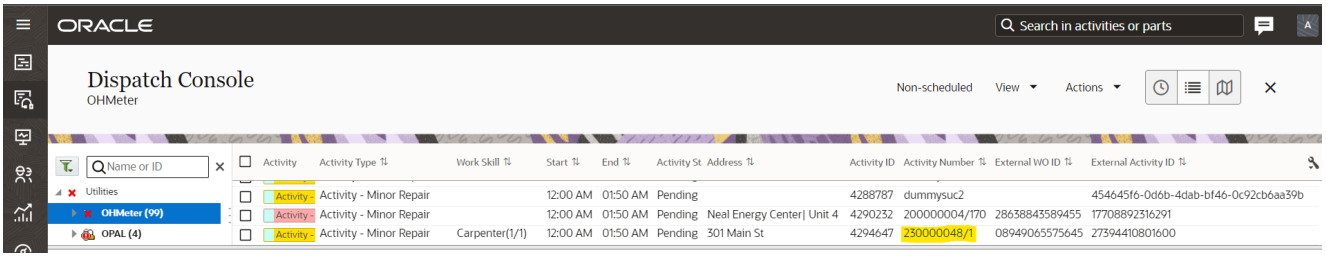
1. Navigate to the **Activity Log** page of the respective activity.
2. Click the **Outbound Synchronization Request** object to open the **Outbound Request Details** page.



3. Under **Record Actions**, click **Send Message** to initiate the request to Oracle Field Service.



4. Navigate to the Administrator Dispatch Console in Oracle Field Service to see the mobile activity created corresponding to the activity created in Oracle Utilities Work and Asset Cloud Service.



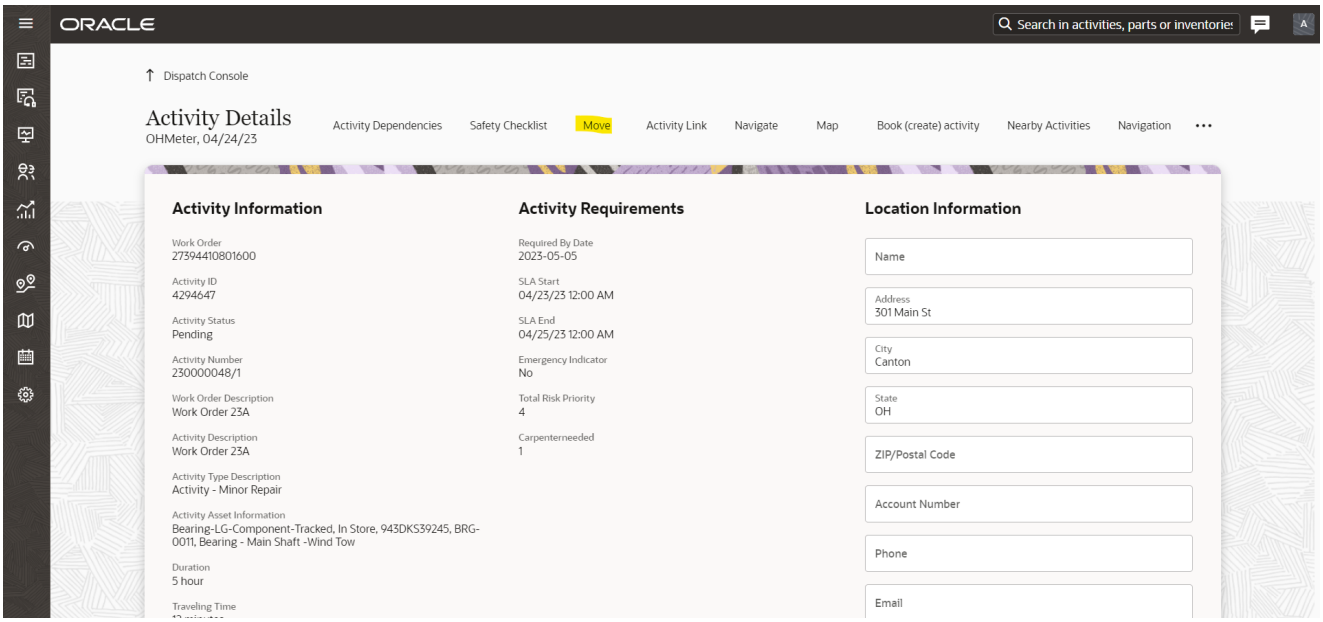
Make sure the required configurations are in place. If there is a configuration issue, Oracle Field Service returns an error message.

Example: Invalid activity type

Assigning a Crew

To assign a crew:

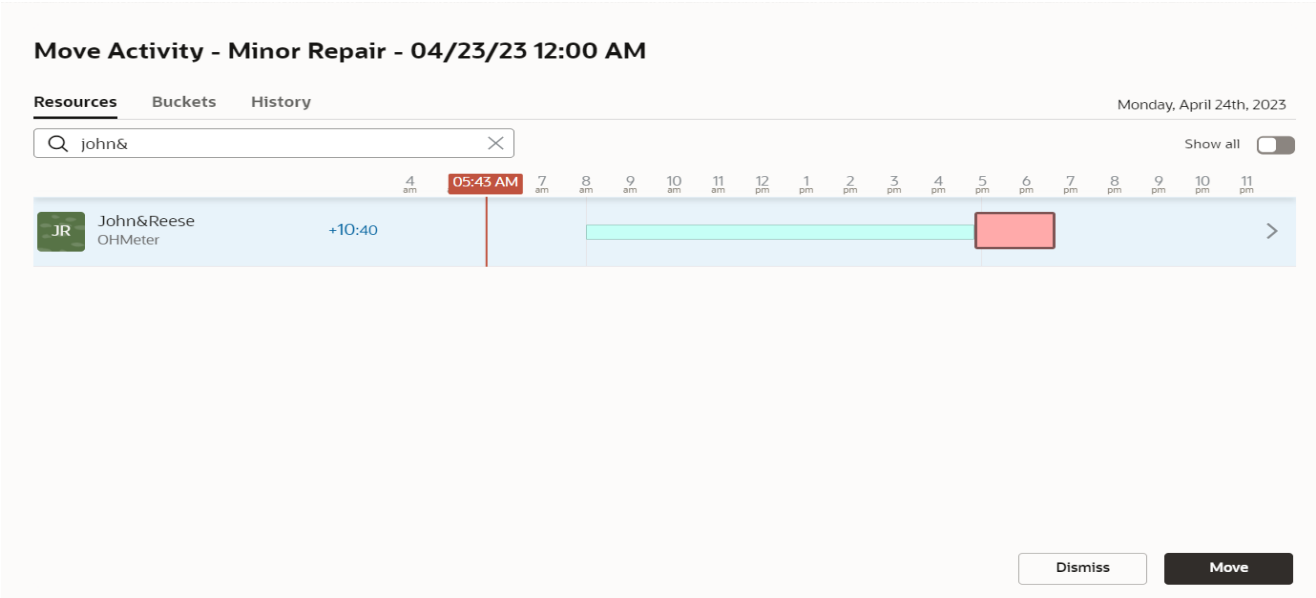
1. Navigate to the Administrator Dispatch Console in OFS and open the mobile activity to view the **Activity Details** screen.



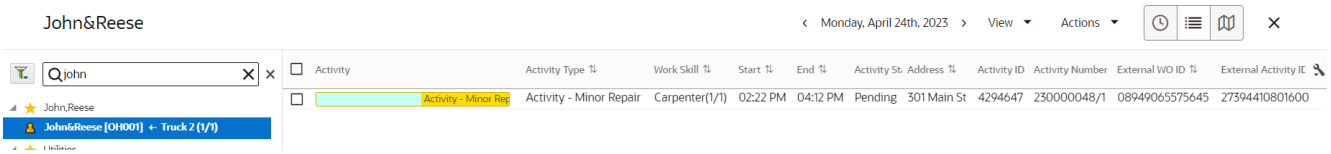
   a. If **Crew Resource** is selected while creating the activity in Oracle Utilities Work and Assets Cloud Service, the details are displayed in the **Resource Preferences** section.

   b. Based on the work skills, the Admin can assign that activity to the preferred resources or other resources.

2. Click **Move** to navigate to the **Move Activity** page.
3. Search the crew member to be assigned to the activity and click **Move**.



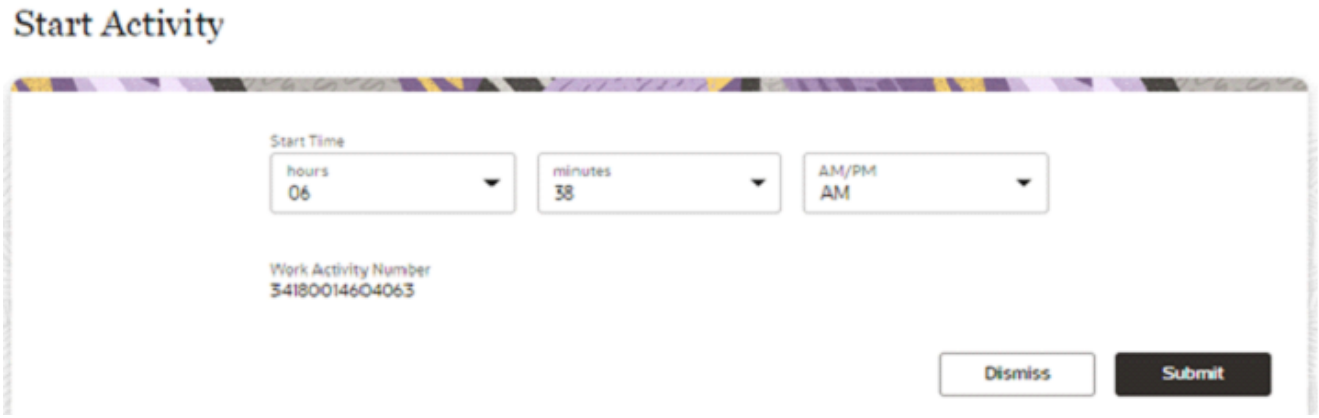
The activity is moved to the crew's queue.



Starting the Activity

To start an activity:

1. Login to the Oracle Field Service Mobility application.
2. Access the **Mobility** page using the worker's or technician's credentials. The page shows the activities in the queue of the worker or technician.
3. Click **Start** to start the activity in the queue.



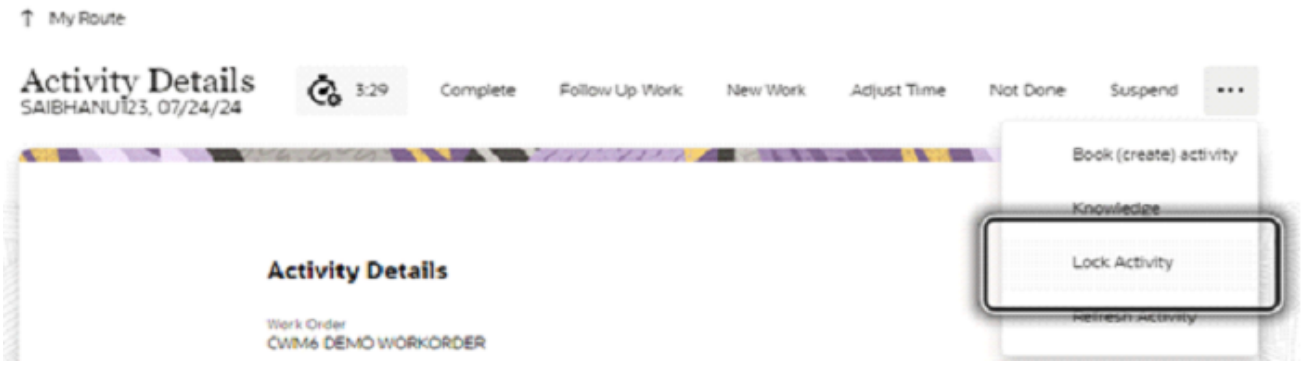
4. Populate the **Start Time** then the **Work Activity Number** and click **Submit**.

Locking the Activity

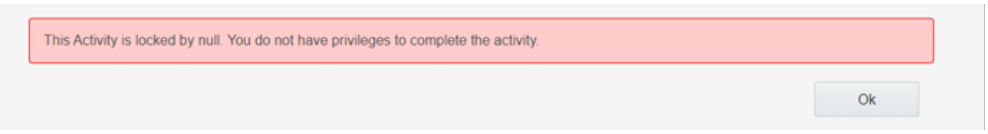
Activity is presented to mobile user in read only mode. To make changes to the activity, enter completion information, service histories and resource usage, you must lock the activity. Locking an activity guarantees that only one member of the crew can update the activity. After the work is done, unlock the activity so that other crew members can make their updates.

> **Note:** The Lock functionality can be enabled or disabled by setting the lock.functionality property in the WAMOFSC_ConfigProps lookup in Oracle Integration Cloud to "true" or "false". For more information,

refer to the *Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Configuration Guide* included in this release.

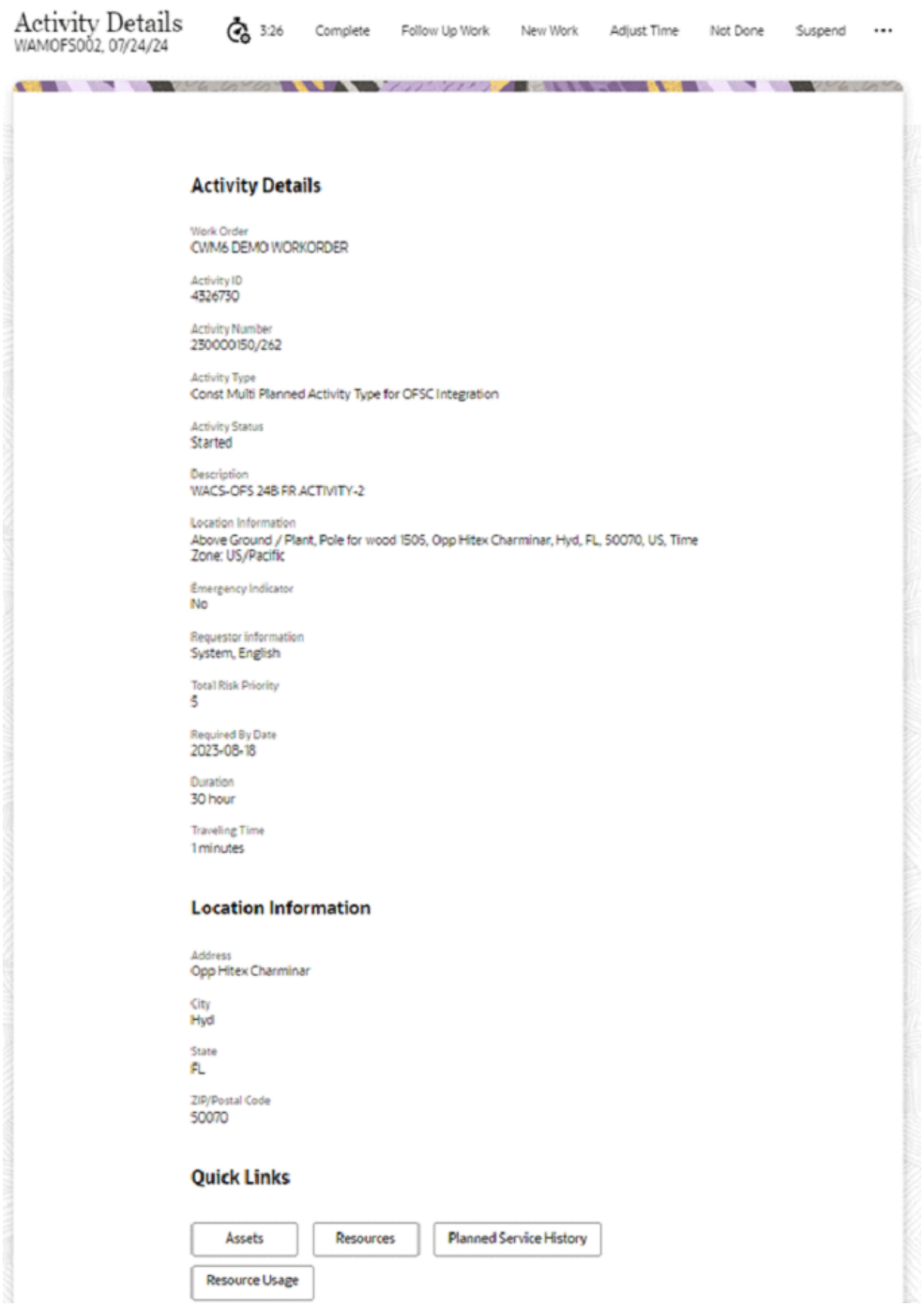


Note: Make sure to lock the activity while completing it. If the lock is released, the following error is displayed.

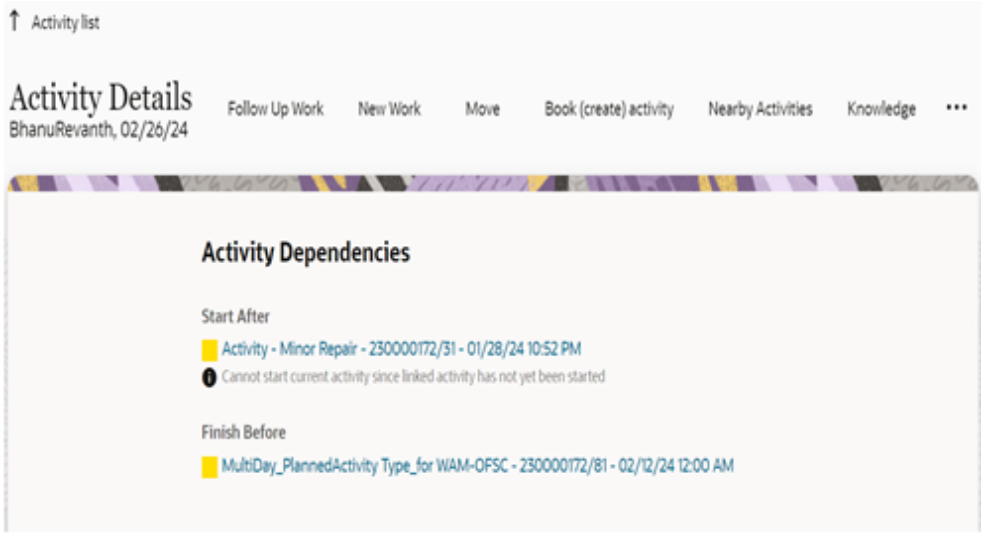


Viewing the Activity Details

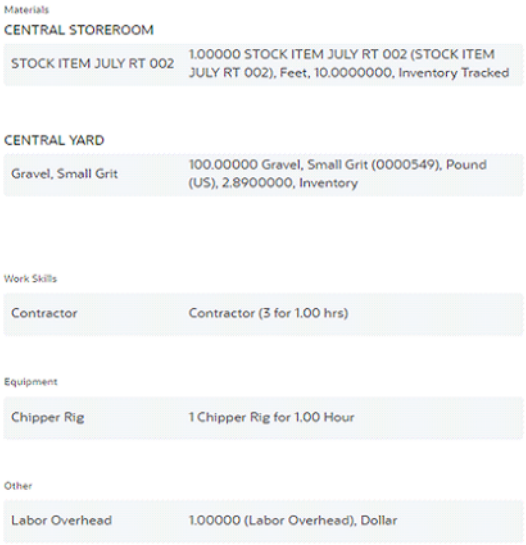
Crew can view information about an activity, including resources required for the activity and assets to be serviced.



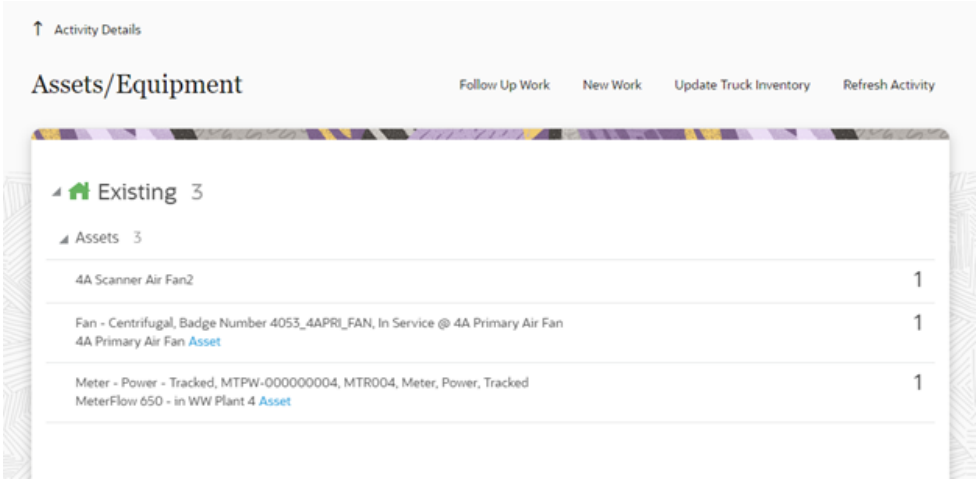
If any activity has dependencies, the information related to it gets displayed in Activity Dependencies section. Only warning message is displayed in **Activity Dependencies** section.



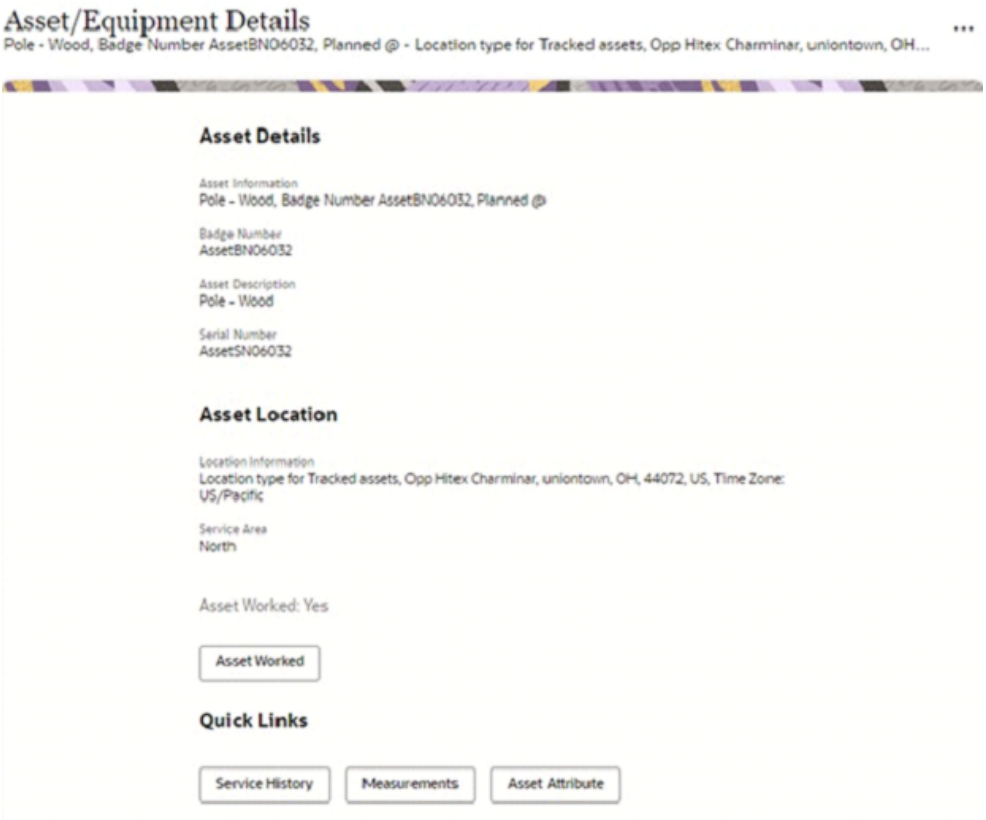
To view resources, navigate to the **Activity Details** page and click **Resources**. Resources include planned materials, work skills, equipment and other resources defined by activity planner.



To view the list of assets for an activity, navigate to the **Activity Details** page and click **Assets**.



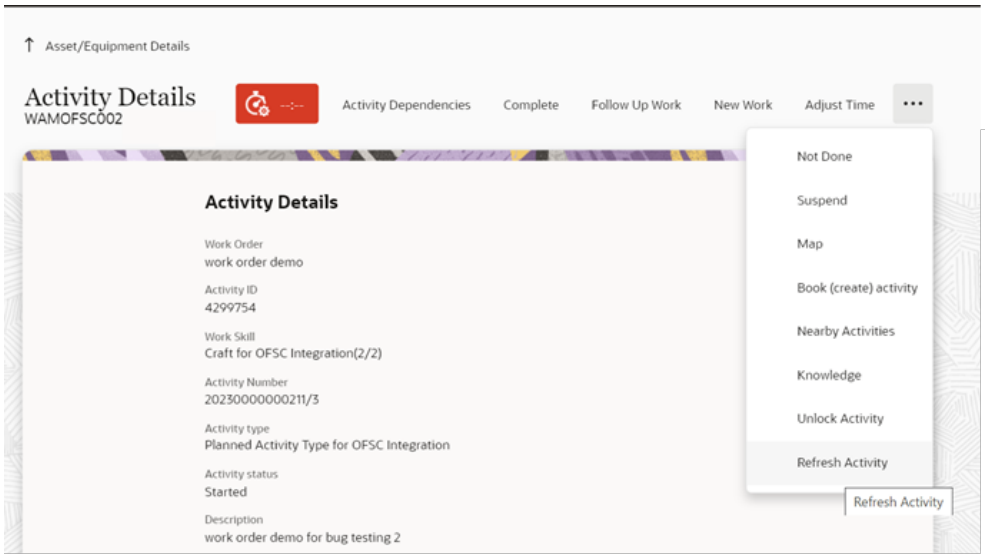
The following figure shows Oracle Field Service displaying all assets attached to an activity. Select the required asset to view the asset information.



The crew can also view the details of attachments. In Oracle Field Service, click **Attachment** on the **Activity Details** page. These activity level attachments are added to Oracle Utilities Work and Asset Cloud Service while creating the activity and are sent to the Oracle Field Service through Oracle Utilities Work and Asset Cloud Service outbound messages. The user is permitted to only download the attachment, but not edit or delete it at the activity level.

Refreshing the Activity

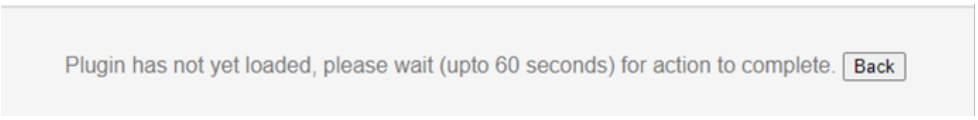
Refresh an activity to get the latest updates on that activity or any asset/component that is issued after assigning the activity.



The confirmation message indicates that the refresh activity was successful.

After refreshing the activity, the issued assets and components (if any) are displayed in the **Issued Assets** row.

Make sure the Material plugin is configured with the Activity Pull Update Oracle Integration Cloud endpoint correctly. If not, the a message to wait for the 'action to complete' is displayed.



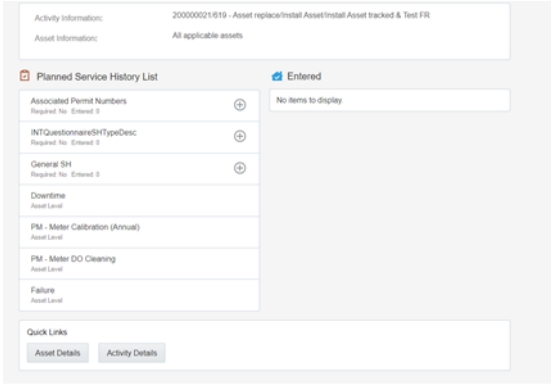
Service Histories

Two types of service histories can be entered for activity:

- Planned Service Histories: Planned service histories are requested by a person who plans an activity and must be entered by field crew. These service histories can be entered from the **Planned Service Histories** page. After they are created, they will be displayed among the asset specific service histories.
- Asset Service Histories: Asset service histories are additional service histories valid for that asset. They are listed in the asset's **Service Histories** page.

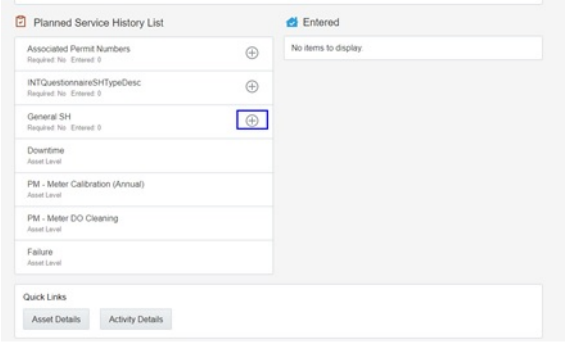
Planned Service Histories

To enter planned service histories, navigate to the **Activity Details** page and click **Planned Service History**. The **Planned Service Histories** page is displayed.



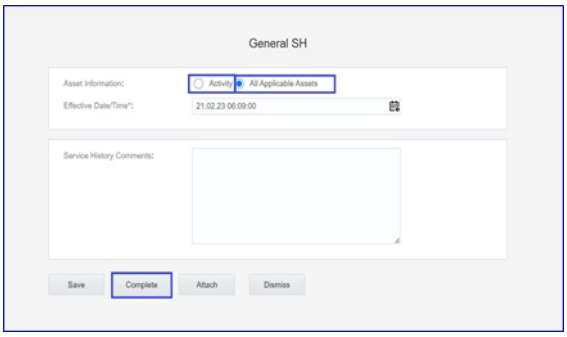
To enter the planned service history details:

1. From the list of planned service histories that are part of the activity, click **+** next to the specific service history, and add the necessary details.

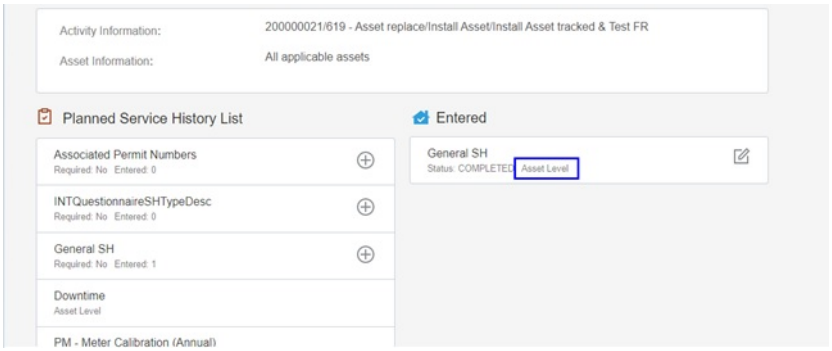


Users have an option to add service histories at Activity Level or at All Applicable Assets, if the service histories are not asset specific.

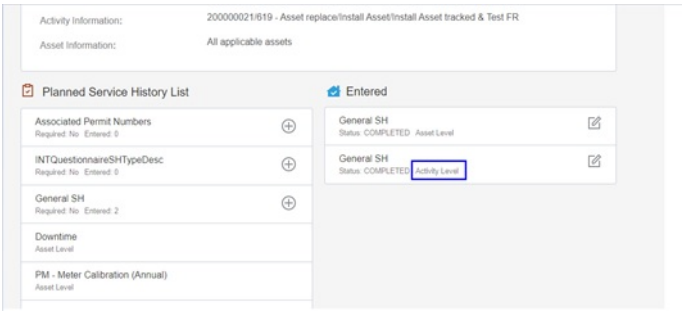
2. Click **Complete**. Service histories are displayed in the **Entered** pane.



If All Applicable Assets is selected, service histories will be added at all applicable assets and will also be displayed in the Entered section with an indication as Asset Level.

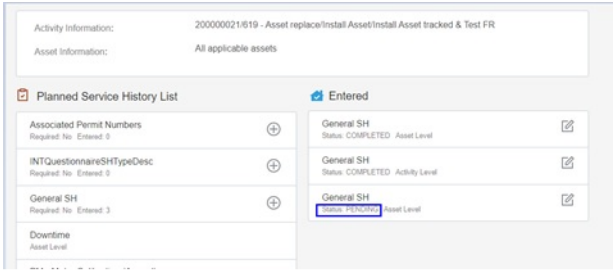


If Activity is selected while adding the service histories, they will be added at activity level and displayed in the Entered section with an indication Activity Level.

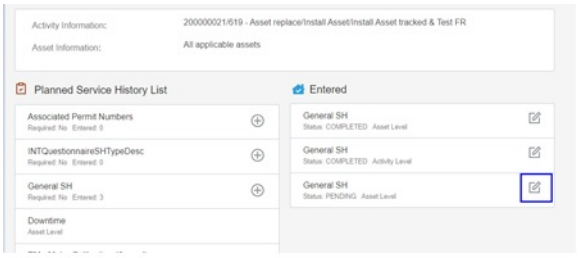


Note: Crew can also save the service history in 'pending' state.

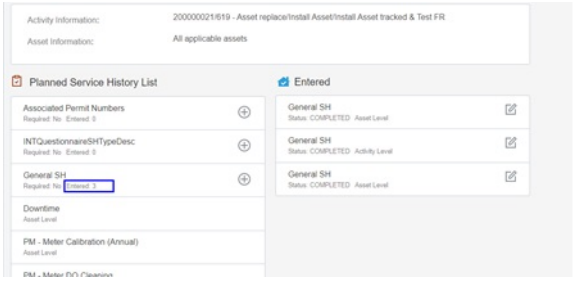
3. Click **Save**. The pending service histories are displayed in the **Entered** pane with the 'pending' status.



4. To complete a service history in 'pending' status:
    a. Click **Edit** to edit a specific service history.



The completed service histories are displayed in the **Entered** pane. The number of times the service history was added is also shown.



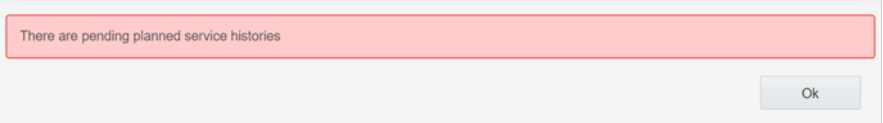
b. Click **Attach** to attach images of various artifacts.

c. Browse and select the file to attach. Click **Upload**.

d. After the attachment is uploaded, a list of attachments (unsaved attachments) is shown. Click **Complete** to complete the service history.

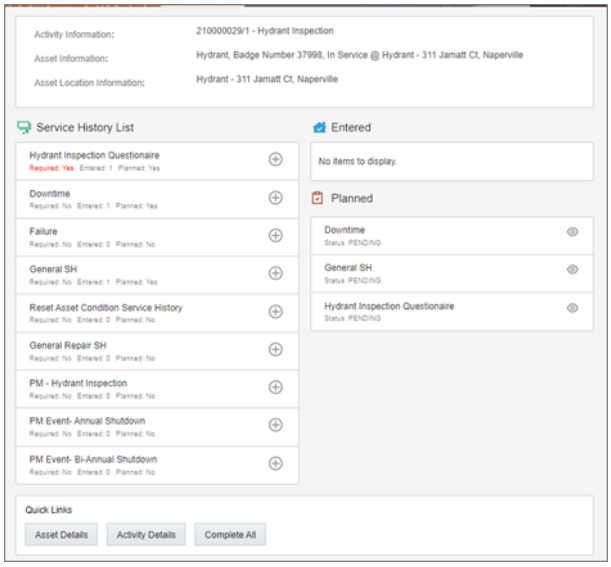
e. Make sure the service histories that are marked as **Required: Yes** have at least one entry.

f. Make sure that there are no planned service histories in 'Pending' status. If there are any, the following warning message will be displayed while completing the activity.



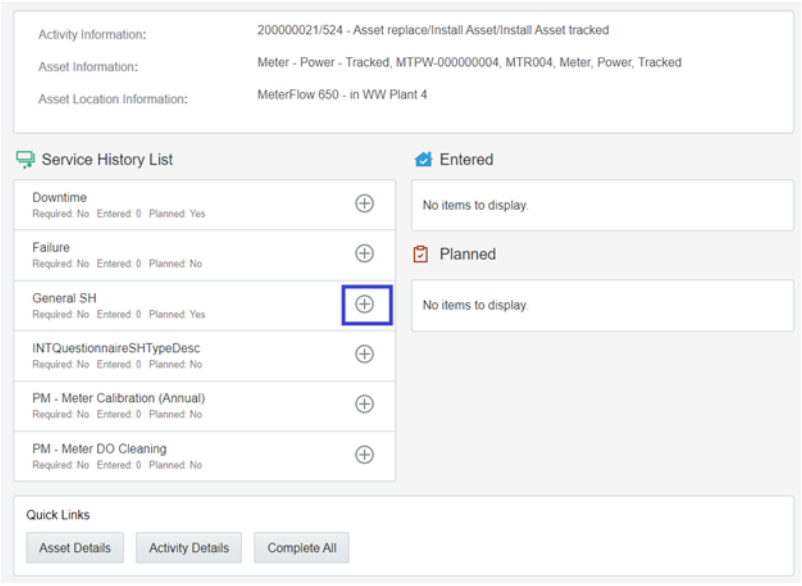
Asset Service Histories

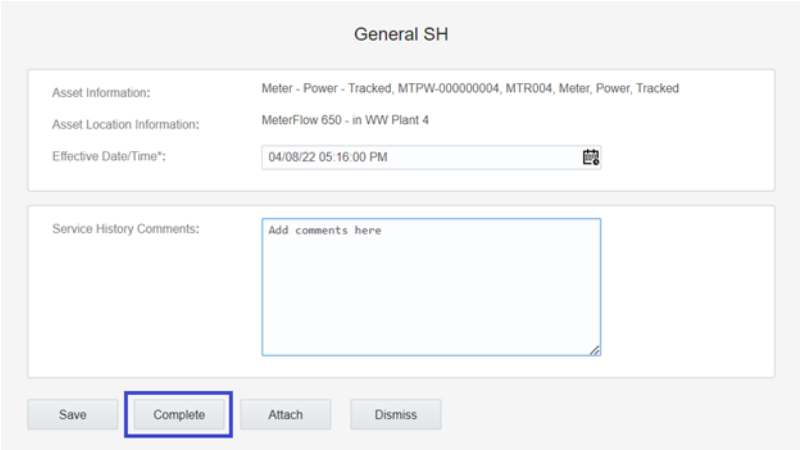
To enter an asset's service histories, navigate to the **Asset** page and click **Service History**.



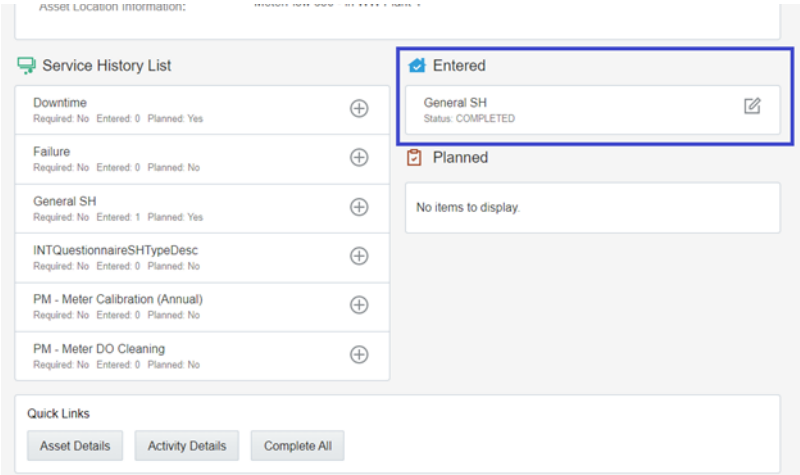
To enter the service history details:

1. Click **Service History** on the **Assets** page.
2. From the list of service histories that are part of the activity, click **+** next to the specific service history to add the required details.

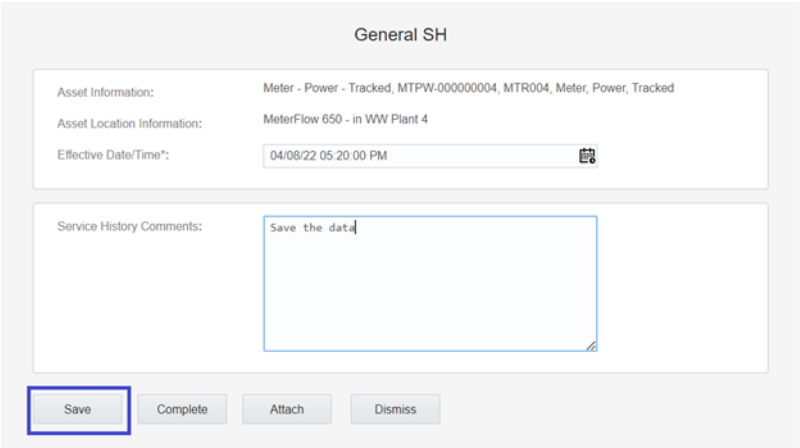


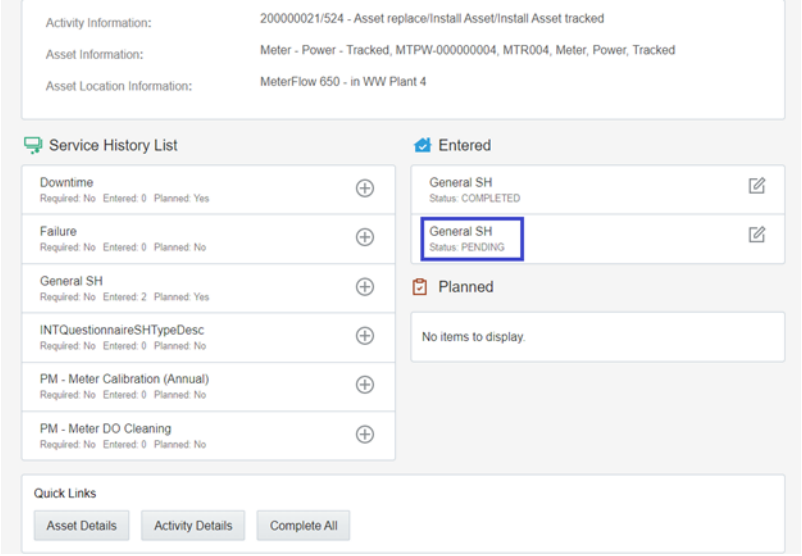


3. Click **Complete**. The service histories are displayed in the **Entered** pane.

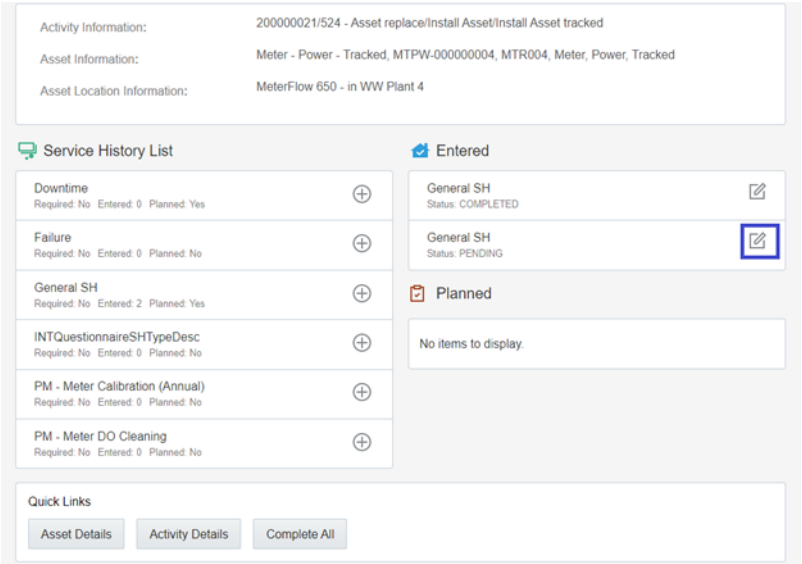


Note: Crew can also save the service history in 'pending' state. Click **Save**. The pending service histories are displayed in the **Entered** pane with the 'pending' status.

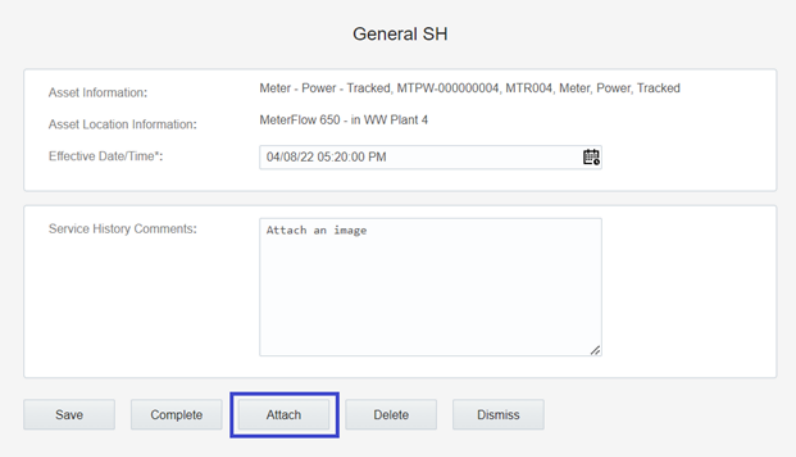




4. To complete a service history in 'pending' status:
    a. Click **Edit** to edit a specific service history.



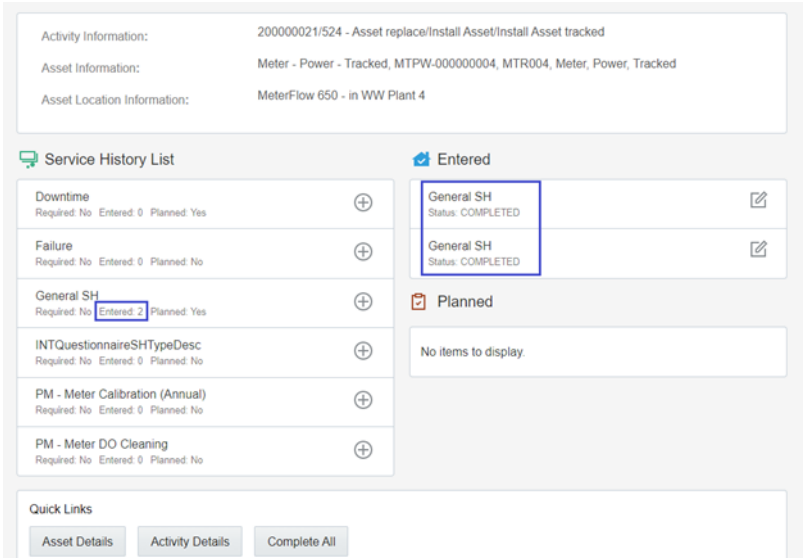
    b. Click **Attach** to attach images of various artifacts.



c. Browse and select the file to attach. Click **Upload**.

d. After the attachment is uploaded, a list of attachments (unsaved attachments) is shown. Click **Complete** to complete the service history.

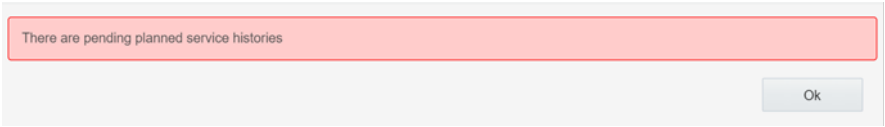
The completed service histories are displayed in the **Entered** pane. The number of times the service history was edited is also shown.



e. Populate the details for required service histories.

f. Make sure the service histories that are marked as **Required: Yes** have at least one entry.

g. Make sure that there are no planned service histories in 'Pending' status. If there are any, the following warning message will be displayed while completing the activity.



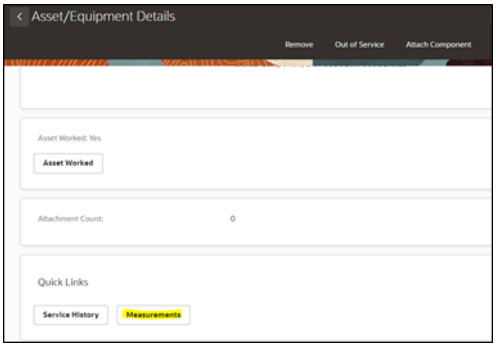
h. Click **Asset Details** to navigate back to the **Asset Details** page.

There are five service histories categories supported out of the box: Questionnaire, Inspection, Failure, Downtime and General. They correspond to business objects defined in Oracle Utilities Work and Asset Management.

Measurements

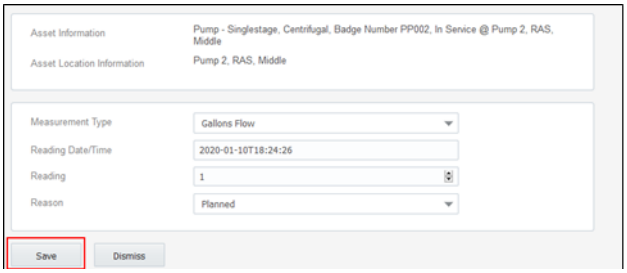
To enter an asset's measurements:

1. Navigate to the **Assets** page.
2. Click **Measurements**.

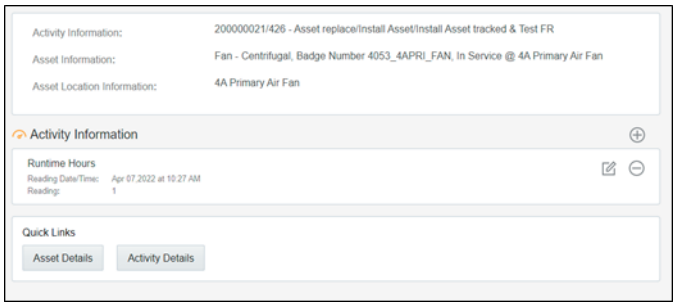


3. Click **+** on the **Measurement Mobility** page.

4. Enter the required measurement details and click **Save**.



The measurement is displayed in the list.

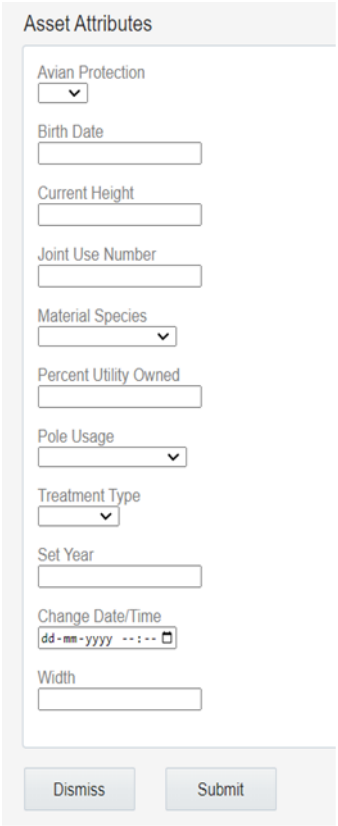


5. Click the edit icon to edit the measurement. You can enter multiple measurements.
6. Click **Activity Details** to navigate back to the **Activity Details** page.

Asset Attribute

To view or update the asset attribute details of an asset:

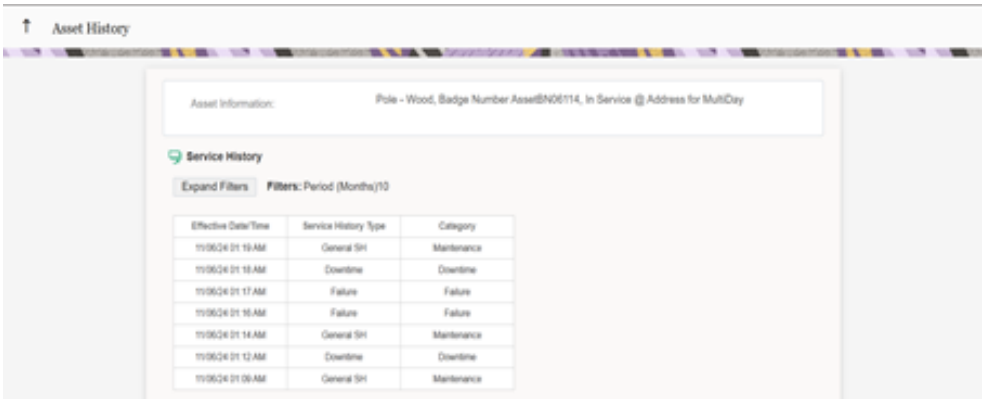
1. Click **Asset Attribute** in the **Quick Links** section in the **Asset/Equipment** details page.
2. It will navigate to the **Asset Attribute List** page. Update asset attributes that are necessary. Click **Submit**. The details will be saved and navigated back to the **Asset Details** page.
3. Click **Dismiss** to navigate to the **Asset Details** page if you do not want to save your updated values.

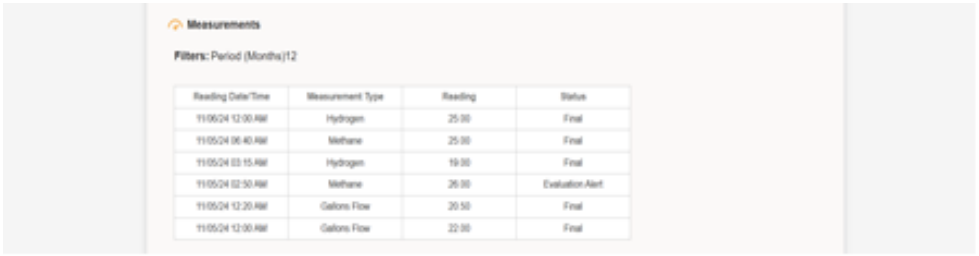


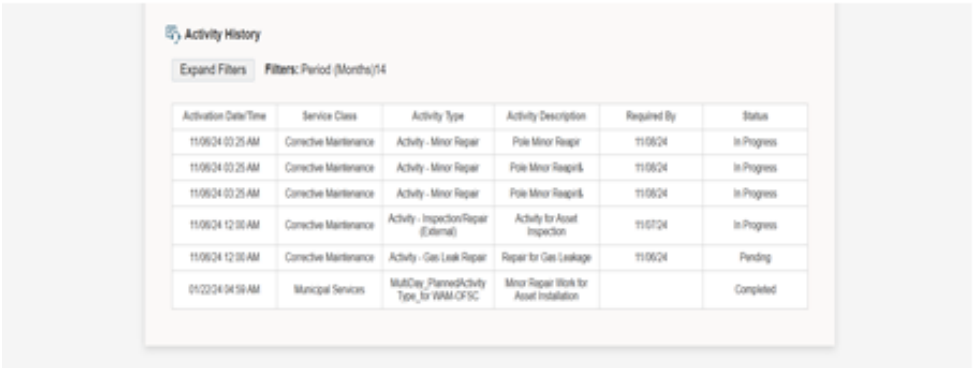
Asset History

To view the history details of an asset:

1. On the **Asset/Equipment Details** page, click **Asset History** in the **Quick Links** section. The **Asset History Details** page, you can see the **Service History**, **Measurements**, and Activity History details.
2. Click **Expand Filters** to view the available filters, and then click **Search**.
3. Click the arrow on the **Asset History** page (available on the top-left corner of the page) to navigate back to the **Asset Details** page.







Resource Usage

To enter resource usage details:

1. Click **Resource Usage** in the **Quick Links** section in the **Activity Details** page.
2. Enter time sheets, equipment, and other details.

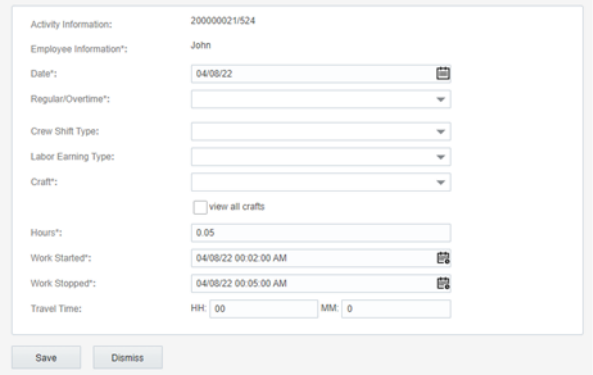
   The user operations performed on the **Resource Usage** page are shown for both Individual Crew and Supervisor.

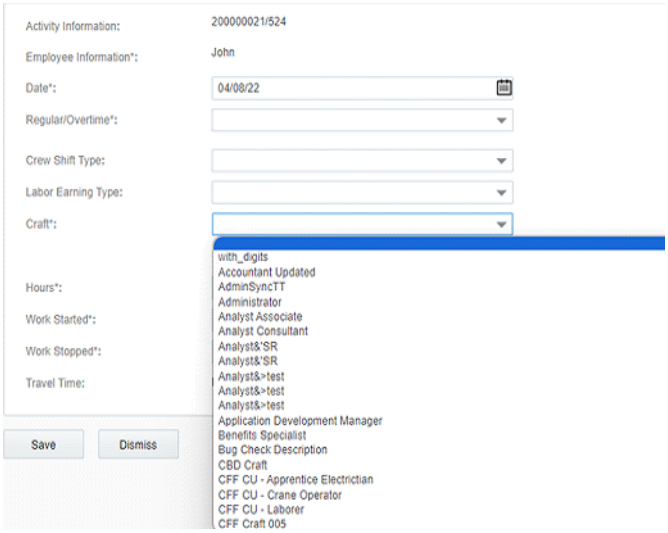
   Individual Crew

   a. Click **+** against the **TimeSheet** section for an individual crew to enter individual timesheets.

   - Actual time spent on the activity is defaulted in the time sheets to avoid manual entry. But a crew can always change the time spend by manually selecting date time from the calendar.
   - When the activity is in started state, the **Work Started** field defaults to the time the crew started the activity. **Work Stopped** defaults with the time derived from the activity's start time plus its duration.
   - When the activity is completed by the crew, work started and work stopped are populated with the exact times that the activity was stared and completed.
   - The **Hours** field is read-only and defaulted with the difference between **Work Stopped** and **Work Started**.

     The timesheet also auto populates the crew member's craft or work skills. Additionally, the user has an option to view all the craft skills. Select the **View All Crafts** checkbox to view the available craft skills.





b. After saving, the timesheet is created in 'pending' status.

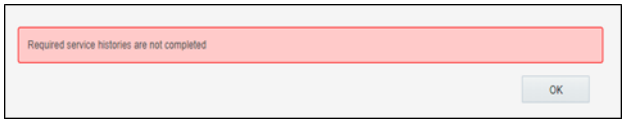
c. Click the **Edit** icon. Enter the necessary details and click **Complete** to complete the timesheet.

d. Populate the entries for equipment and other.

e. Navigate back to the **Activity Details** page after populating all the required resource details.

f. Click **Complete** to verify the eligibility of the activity to complete.

g. If all activities are not eligible for activity completion, the following message is displayed. Click **OK**.

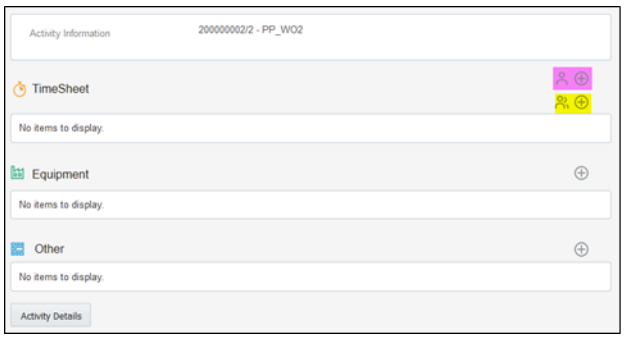


h. Else, the **End Activity** page is displayed. Click **Submit**.

The completion information is sent to Oracle Utilities Work and Asset Cloud Service and the activity is completed.

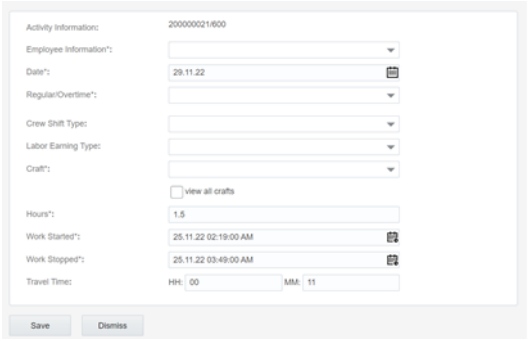
Supervisor

A supervisor can enter individual timesheets (highlighted in purple) or for team (highlighted in yellow). In addition, a supervisor can enter individual timesheet for himself if the secure parameter, "ofsc_sup_in_team" is set to 'true/yes' in the plugin settings.



a. Click **+** against the **TimeSheet** section to add an individual timesheet (highlighted in purple in the figure above).

- Actual time spent on the activity is defaulted in the time sheets without manual entry. But, a supervisor can always change the time spent by manually selecting from the calendar.
- When the activity is in started state, the **Work Started** field defaults to the time the crew started the activity. Work Stopped defaults with the time derived from the activity's start time plus its duration.
- When the activity is completed by the crew, work started and work stopped are populated with the exact times that the activity was stared and completed.
- The **Hours** field is read-only and defaulted with the difference between **Work Stopped** and **Work Started**.
- The timesheet also auto populates the crew member's craft or work skills. Additionally, you can view all the craft skills. Select the **View All Crafts** checkbox to view the available craft skills.



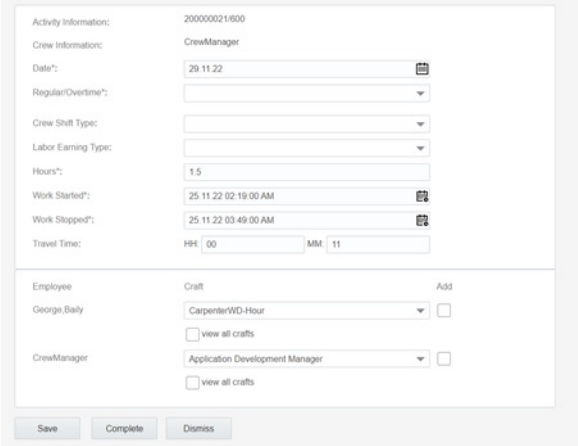
b. Enter the required information and click **Save**.

c. Click the **+** icon to add timesheet for the team (highlighted in yellow in the figure above).

d. After saving, the timesheets for each crew member are created in 'pending' status.

e. Click the **Edit** icon. Enter the necessary details and click **Complete** to complete the timesheet.

f. Populate the entries for equipment and other.

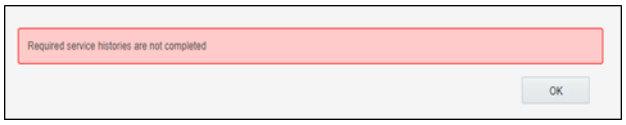


Make sure that the Resource Usage Details OIC integration is active. Also, make sure that the Resource Usage plugin in Oracle Field Service is configured with the correct Oracle Integration Cloud endpoint.

Activity Completion

To complete an activity:

1. Navigate back to the **Activity Details** page after populating all the required resource details.
2. Click **Complete** to verify the eligibility of the activity to complete.
3. If all activities are not eligible for activity completion, the following message is displayed. Click **OK**.



4. Else, it will navigate to the **End Activity** screen. Click **Submit**.

   The completion information is sent to Oracle Utilities Work and Asset Cloud Service and the activity is completed.

If the Oracle Utilities Work and Asset Cloud Service IWS is not accessible, Oracle Field Service will send the completion event to Oracle Integration Cloud. However, the completion message will not be sent to Oracle Utilities Work and Asset Cloud Service. In that case, the error instance needs to resubmitted from Oracle Integration Cloud. For more information, refer to the Error handling section in *Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Configuration Guide* included in this release.

If the communication from Oracle Field Service to Oracle Integration Cloud fails, Oracle Field Service will retry the completion events that were in error state until the Oracle Integration Cloud communication is successful.

The time limit is 36 hours. After that, all event subscriptions will be deleted in Oracle Field Service.

Interim Completion of Construction Work Activity

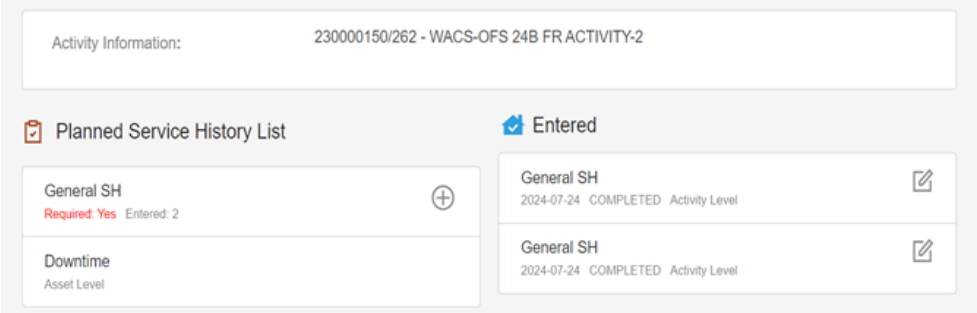
Currently the details of installation, removal, service histories and measurements recorded by a field worker are only sent from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service when an activity is completed in Oracle Field Service. For an activity that requires more than one day of work (multi-day activity) and so has multiple segments in Oracle Field Service, the details are only sent from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service when all segments have been completed.

Interim completion will allow the details of installation, removal, service histories and measurements to be sent from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service when an individual segment is completed. For this release only, it is applicable to Construction Work Activities.

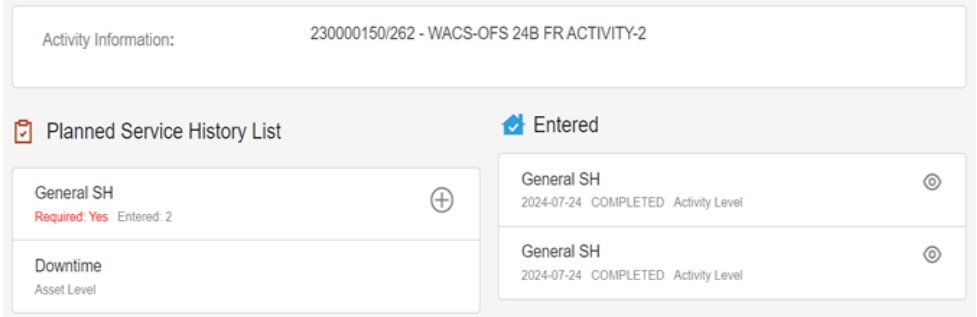
Some of the key points related to Interim Activity Completion:

1. Planned Service Histories and Service Histories that have been sent to Oracle Utilities Work and Asset Cloud Service/Oracle Utilities Work and Asset Management in previous segments are available in View mode only. They cannot be edited.

   Previous Segment

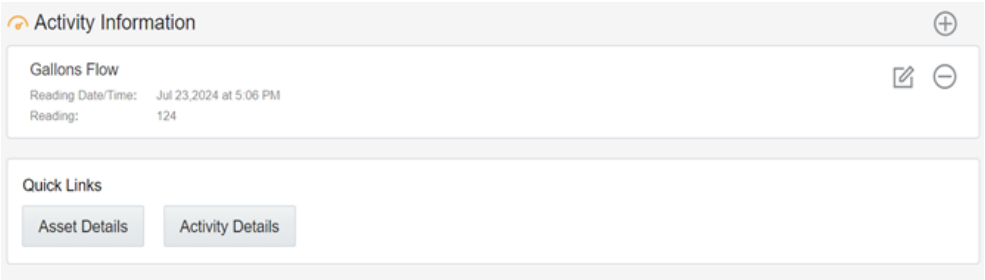


   Latest Segment

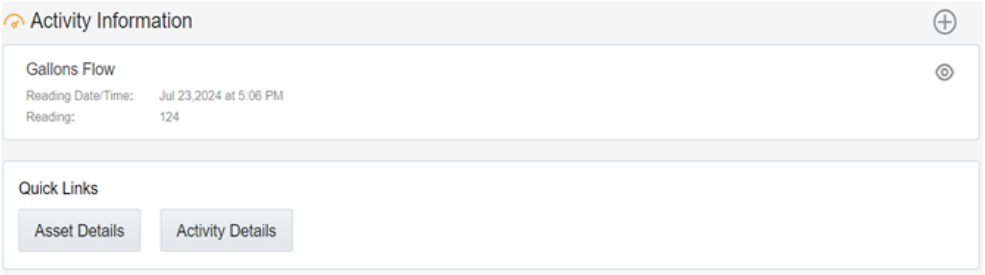


2. Measurements that have been sent to Oracle Utilities Work and Asset Cloud Service/ Oracle Utilities Work and Asset Management in previous segments are available in View mode only. They cannot be edited.

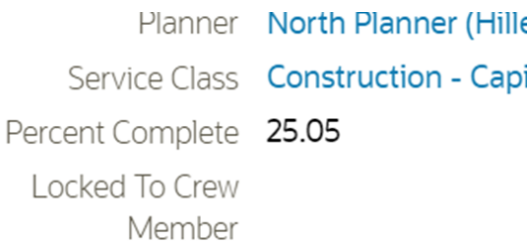
Previous Segment



Latest Segment



3. **Percent Complete** in Oracle Utilities Work and Asset Cloud Service/Oracle Utilities Work and Asset Management shows how much percentage the activity is completed.



4. **Undo** option will not be available for operations (installation, removal, material usage) once details have been sent to Oracle Utilities Work and Asset Cloud Service/ Oracle Utilities Work and Asset Management in previous segments.
5. For Update Quantity task, quantity completed will be sent to Oracle Utilities Work and Asset Cloud Service/Oracle Utilities Work and Asset Management in each segment's interim completion, not when all segments have been completed.

> **Note:** For Interim Activity Completion, do not start the successor segments of activity until either previous segments details are sent to Oracle Utilities Work and Asset Cloud Service/Oracle Utilities Work and Asset Management or completion flow errors out for previous segments.

Asset Installs and Removals

This section includes instructions to perform asset installs and removals.

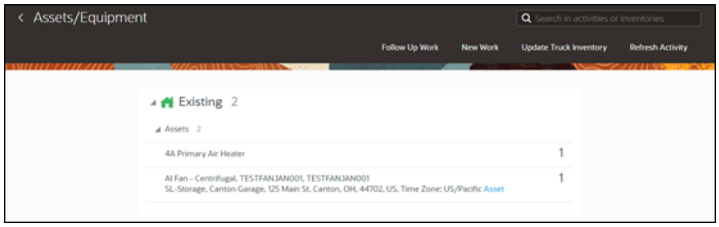
- Installing Assets
- Installing Assets for Construction Work Activity
- Attaching Components
- Moving Assets Out of Service
- Removing Assets or Components
- Removing Assets for Construction Work Activity
- Undoing Installations
- Undoing Newly Attached Components
- Navigating to Parent Assets
- Undoing Asset Removals
- Moving Assets Back to Service
- Replacing Assets
- Replacing Components
- Undoing Asset Replacements

Make sure the Asset Component Install Exchange Undo plugin is configured correctly with the Oracle Integration Cloud endpoint.

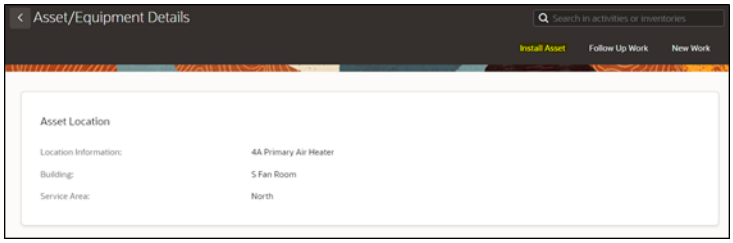
Installing Assets

To install an asset:

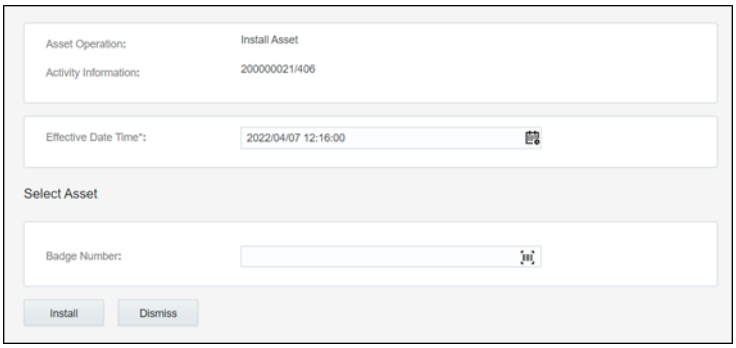
1. Start the activity.
2. To install an asset, click the location.



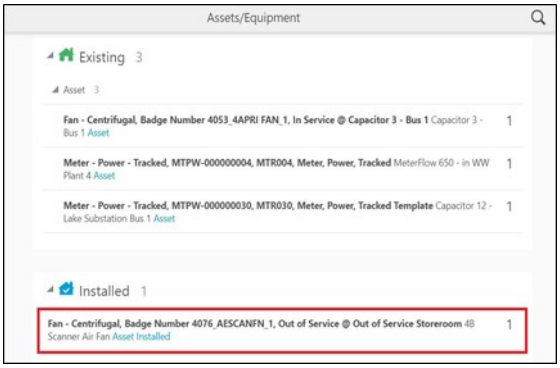
3. Click **Install Asset**.



4. Enter the **Badge Number** of the asset to be installed in this location and click **Install**.



The newly installed asset is shown in the **Installed** pool.



Make sure that the Oracle Integration Cloud endpoints are configured in the Asset Component Install Exchange Undo plugin. If not, the 'plugin not loaded error' is displayed.

Make sure that the asset and location are configured with valid values in Oracle Utilities Work and Asset Cloud Service. If they are not, the asset installation will fail.

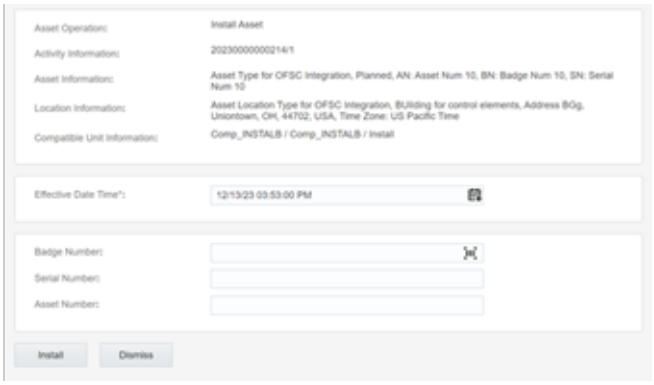
Example: Invalid location for asset installation

Installing Assets for Construction Work Activity

To install a non-tracked asset for construction work activity:

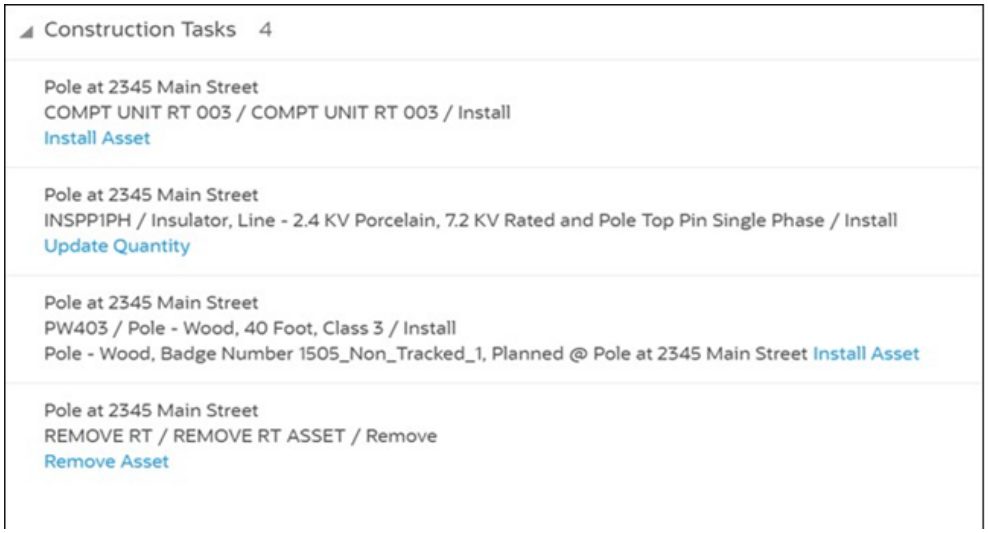
1. Start the activity.
2. Select the location where the asset should be installed and click **Install Asset**.
3. The **Badge Number**, **Serial Number**, and **Asset Number** fields should be displayed and validated based on the value of the corresponding assetNoControl, badgeNoControl, and serialNoControl elements.
   - **W1NP (Not Present)**: This field should not be included on the page.
   - **W1DO (Display Only)**: This field should be present but display only.
   - **W1OP (Optional)**: This field should be present and the value should be editable. When the entered details are validated, if the value is blank, no error should occur.

- **W1RQ (Required)**: This field should be present and the value should be editable. When the entered details are validated, if the value is blank, an error should occur.



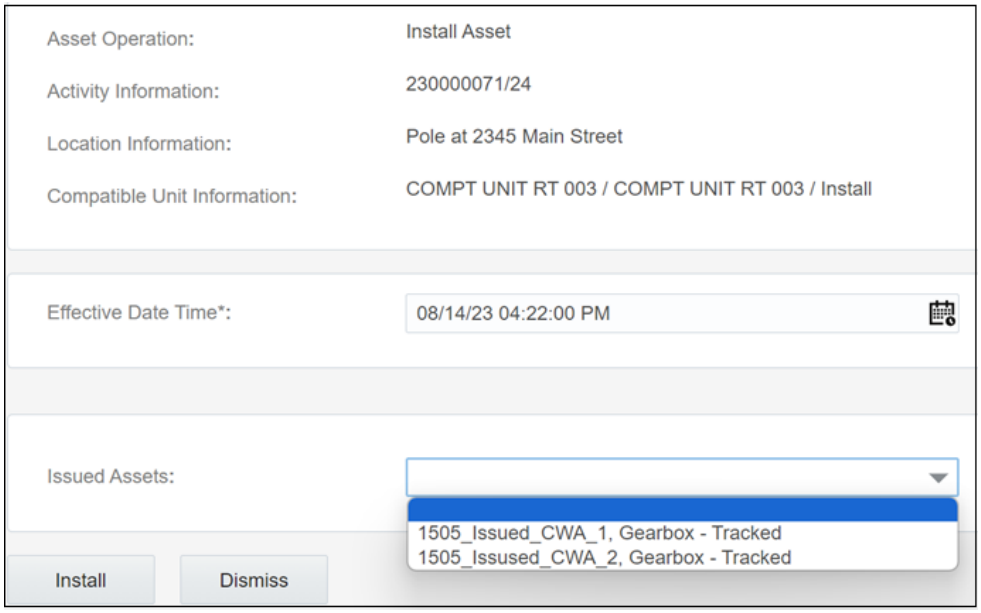
The new asset installed is shown in the **Installed** pool.

Tracked assets are created in Oracle Utilities Work and Asset Cloud Service and they can be either Truck assets or Issued assets. Issued assets are present in regular storeroom. The user must request to install the same asset in Oracle Field Service. Truck assets are present in truck storeroom and they are synchronized to Oracle Field Service by **Oracle Utilities WACS OFSC Schedule Storeroom Sync** in Oracle Integration Cloud by scheduling this flow. Alternatively, you can click **Update Truck Inventory** available on the **Assets/Equipment** page in Oracle Field Service. Click **Install Asset** to view the assets in the **Issued Asset** and **Truck Asset** drop-down lists.

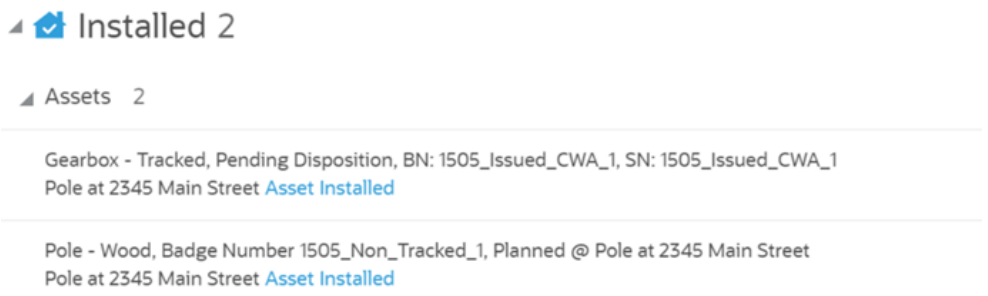


Install Issued Asset

The field worker can install the issued asset on the location. The location type and asset type should be same. Else, the assets will not be shown in the **Issued Asset** drop-down list.

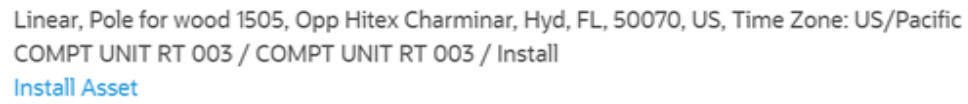


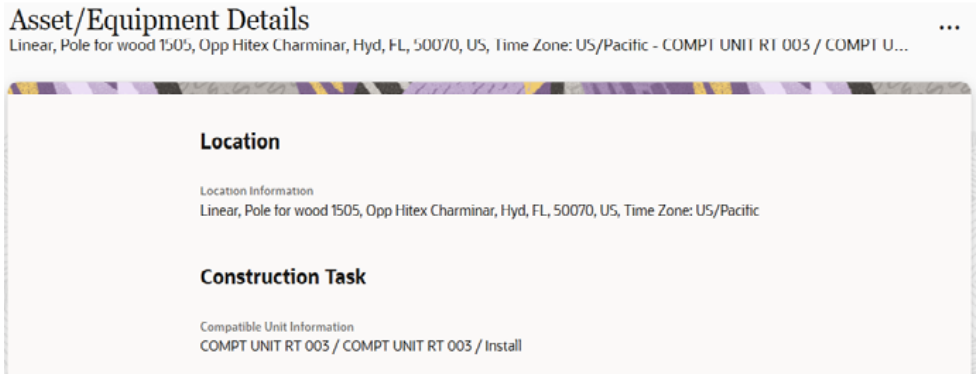
The real time asset verification call will go to Oracle Utilities Work and Asset Cloud Service. After the successful response, the asset will be moved to Install pool in Oracle Field Service.

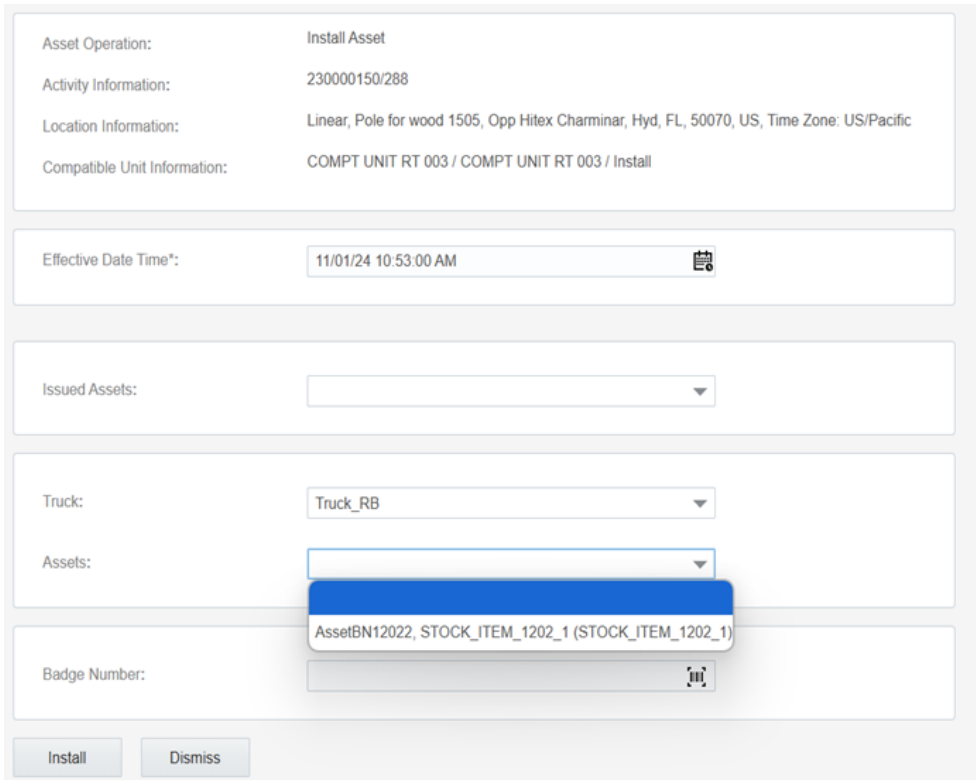


Install Truck Asset

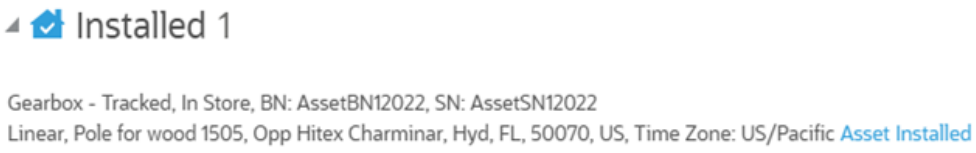
The field worker can install a truck asset on the location. The compatible unit asset type and asset type should be same. Else, the assets will not be shown in the **Asset** drop-down list. Select the truck from the **Truck** drop-down list to view the assets in that truck.



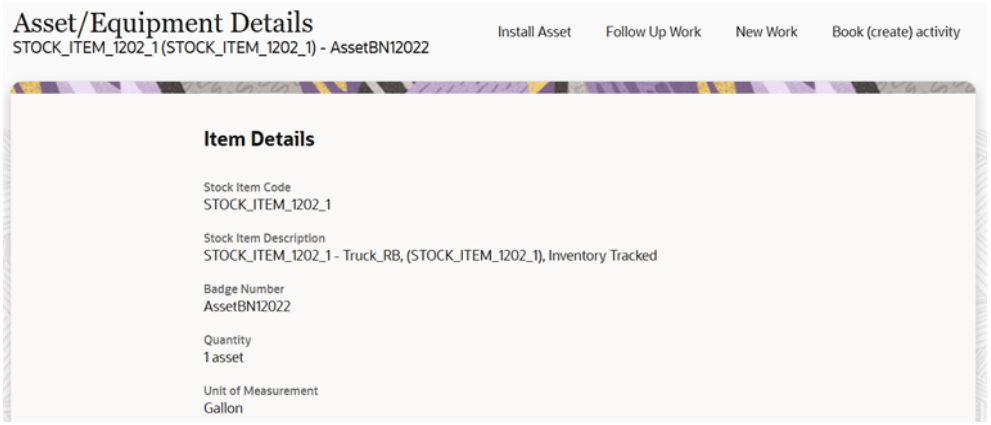


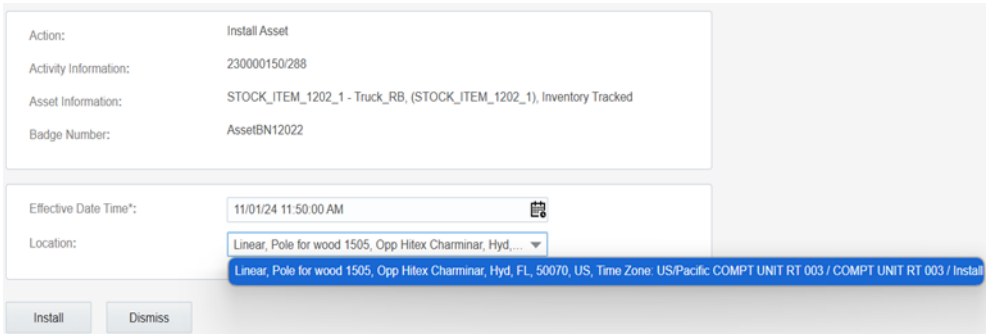


The asset will be removed from respective Truck inventory pool and moved to Install pool in Oracle Field Service.

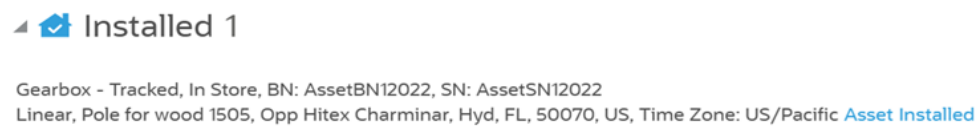


The field worker can install the truck asset from the inventory itself using the Materials plugin. Navigate to the respective asset in truck inventory pool. Click **Install Asset** to view the **Location** drop-down list containing unique combination of location and compatible unit.





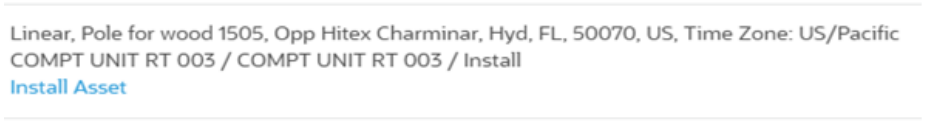
After successful verification, the inventory quantity will be reduced to '0', and asset will be moved to Install pool in Oracle Field Service.

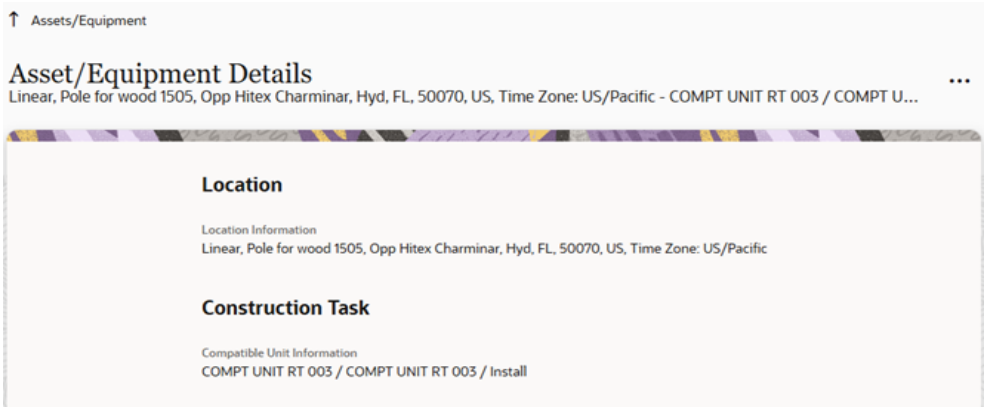


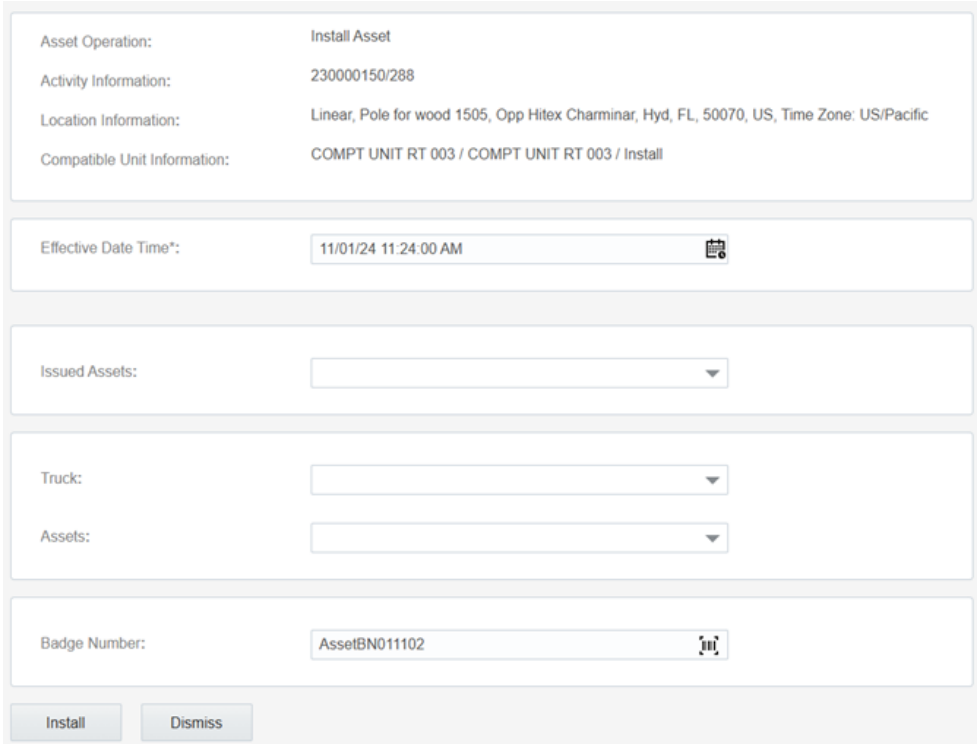
Install a Non-Issued Asset

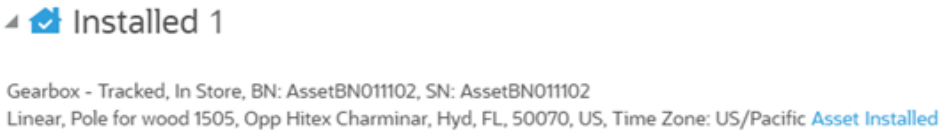
The field worker can install a non-issued tracked asset on the location using the **Badge Number** field. The real-time asset verification call is sent to Oracle Utilities Work and Asset Cloud Service. After successful response, asset type of the asset will be validated to

match the asset type of the compatible unit. Then, the asset will be moved to Install pool in Oracle Field Service.





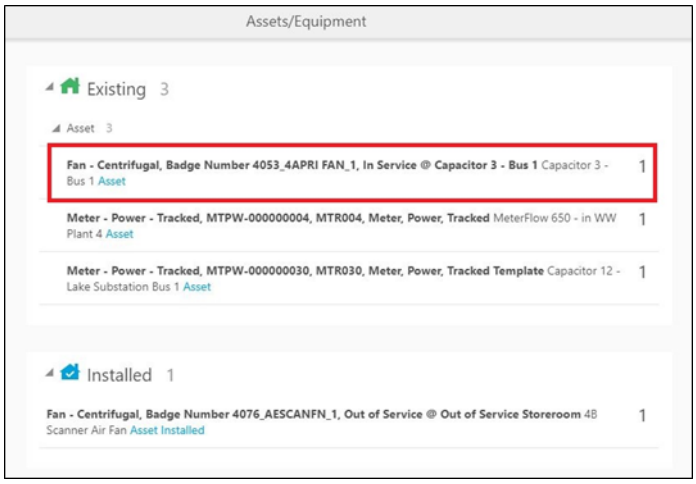




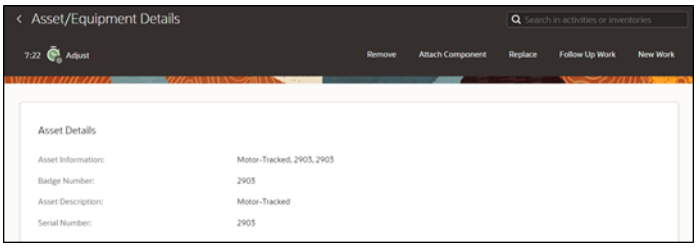
Attaching Components

To attach a component:

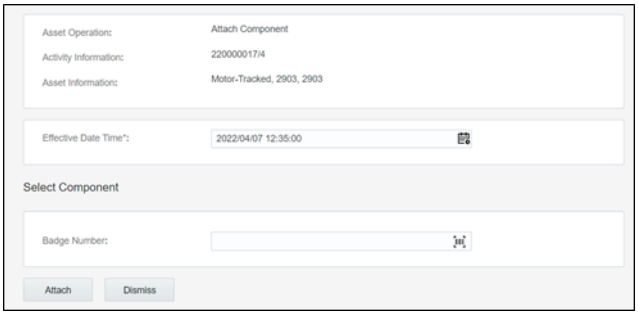
1. Start the activity.
2. To attach a component, click the asset.



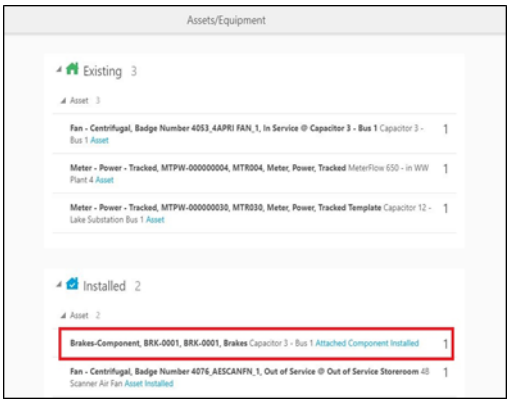
3. Click **Attach Component**.



4. Enter the **Badge Number** of the component to be attached and click **Attach**.



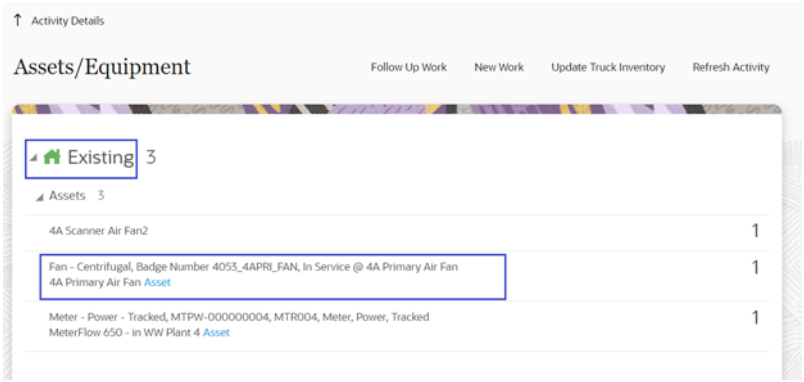
The attached component is shown in the **Installed** Pool.



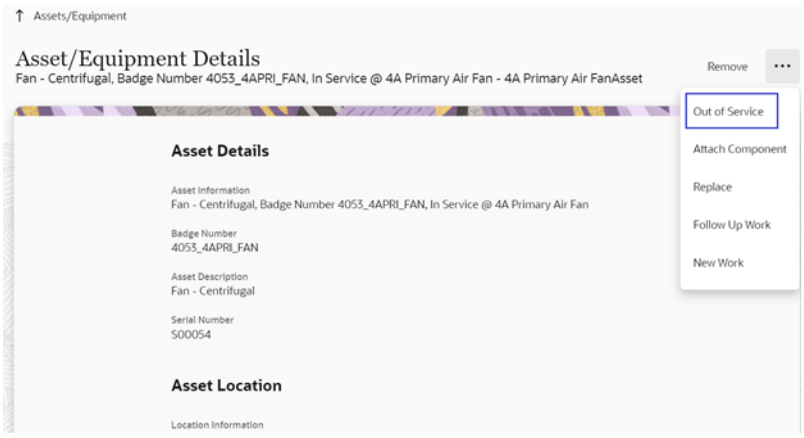
Moving Assets Out of Service

To move an asset out of service:

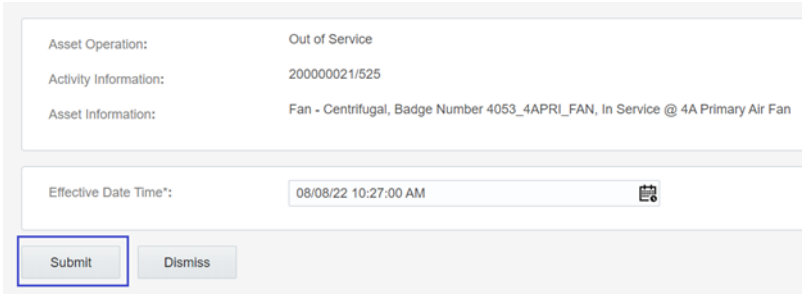
1. Start the activity.
2. To move an asset out of service, click the asset.



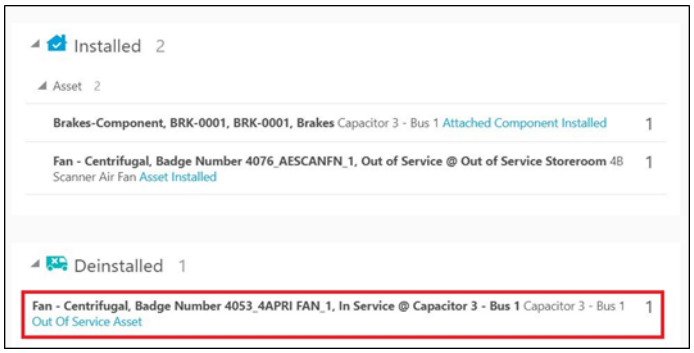
3. Click **Out of Service**.



4. Enter the **Effective Date/Time** and click **Submit**.



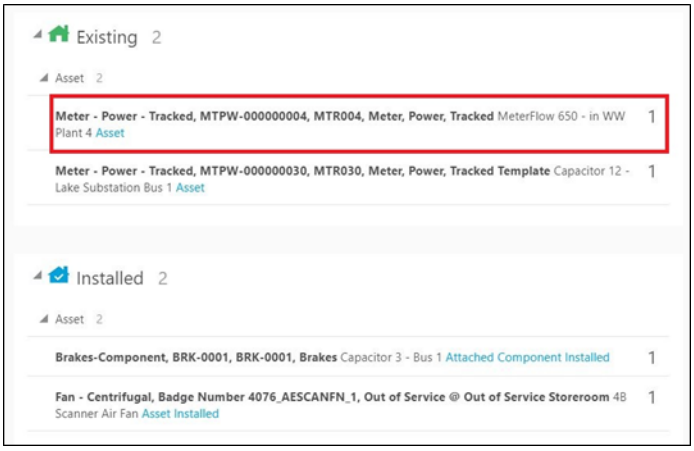
The asset moves to 'out of service' status in the **Deinstalled** pool.



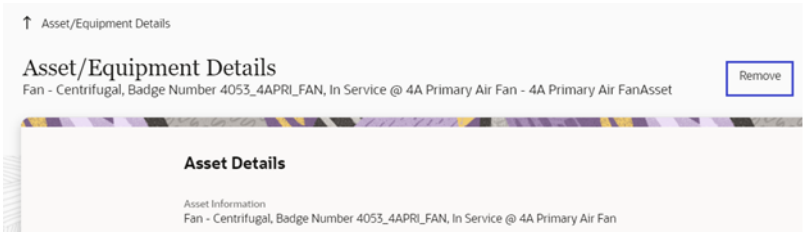
Removing Assets or Components

To remove an asset/component:

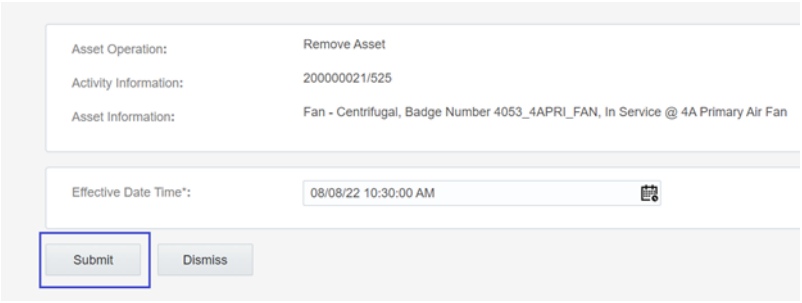
1. Start the activity.
2. Click the asset or component to be removed.



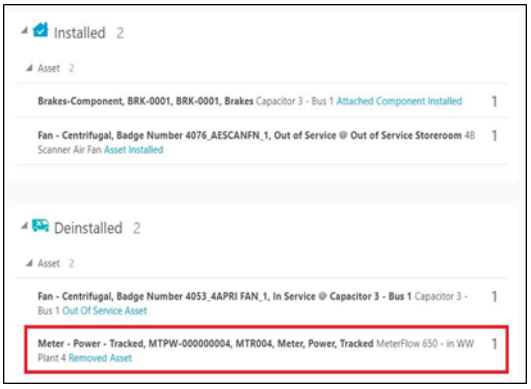
3. Click **Remove**.



4. Enter the **Effective Date/Time** and click **Submit**.



The asset or component is removed and moved to the **Deinstalled** pool.



Removing Assets for Construction Work Activity

To remove an asset for construction work activity:

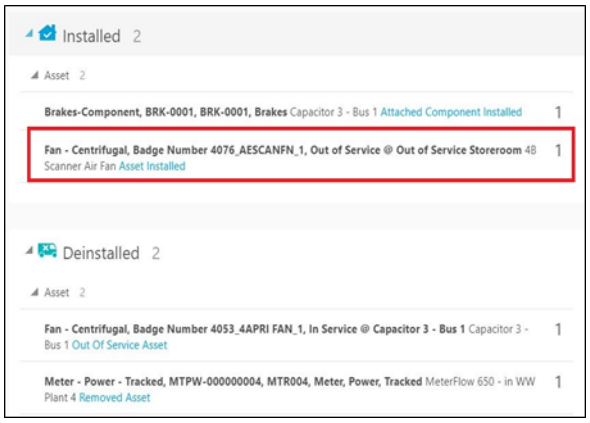
1. Start the activity. Select the asset to be removed and click **Remove**.
2. Select the asset from the **Asset** drop-down list.
3. Select the condition based of which the asset has to be removed, and then click **Submit**. The asset to be removed should be selected from the assets in the installedAsset list where:
   - The asset type in the installedAsset list matches the compatible unit's asset type; and
   - The asset has not already been removed (and so in the Deinstalled group); and
   - The node identifier in the installedAsset list matches the location's node identifier.

The asset or component is removed and moved to the **Deinstalled** pool.

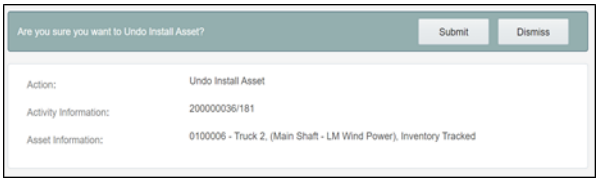
Undoing Installations

To undo the installation:

1. To undo an installation, click the newly installed asset in the **Installed** pool.



2. Click **Undo Install Asset**.
3. Click **Submit**.

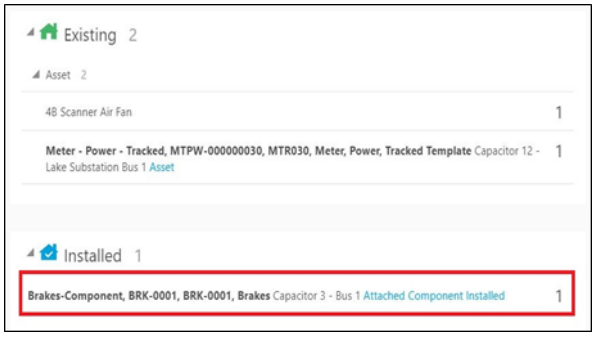


The asset or component installation is undone and it disappears from the **Installed** pool.

Undoing Newly Attached Components

To undo a newly attached component:

1. To undo attach, click the newly attached component in the **Installed** pool.



2. Click **Undo Attach Component**.

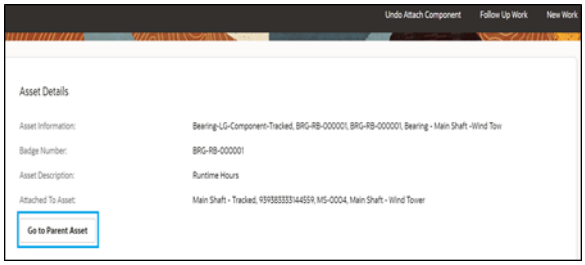
3. Click **Submit**.

The attach operation is undone and the component disappears from the **Installed** pool.

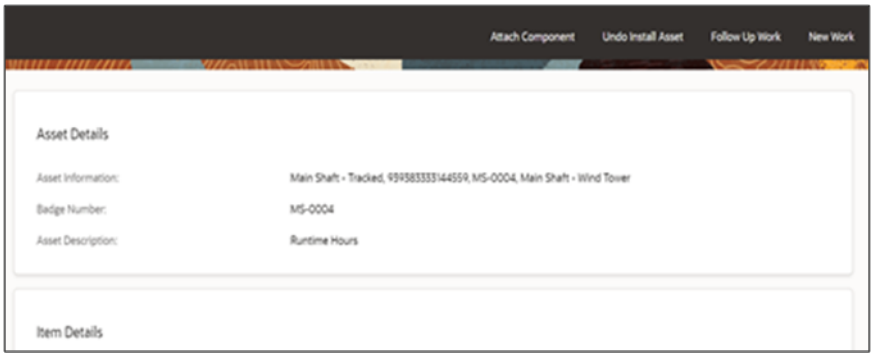
Navigating to Parent Assets

To navigate to the parent asset:

1. Click the newly attached component in the **Installed** pool.



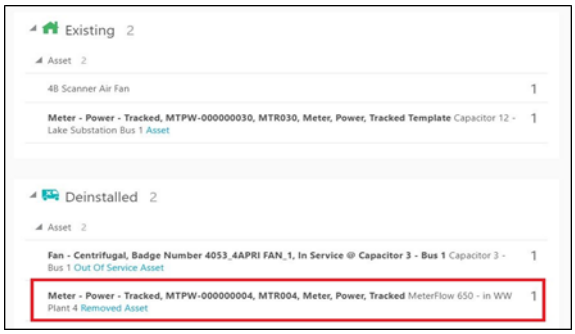
2. Click **Go to Parent Asset** and proceed to the parent asset to which the component is attached.



Undoing Asset Removals

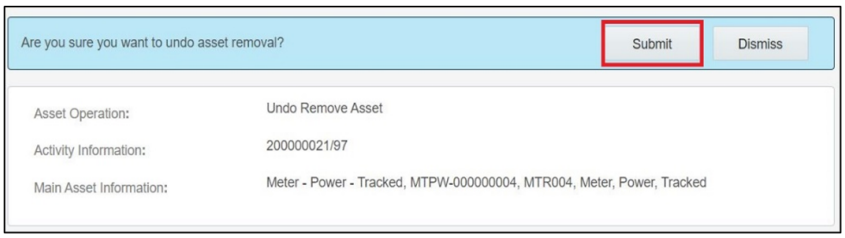
To undo an asset removal:

1. Select the removed asset.



2. Click **Undo Remove**.

3. Click **Submit**.

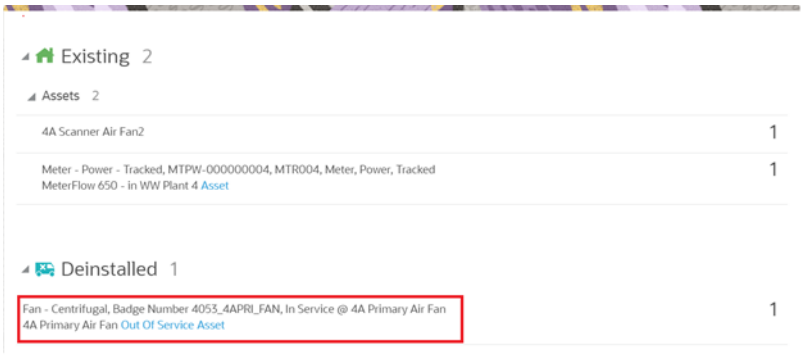


The removal is undone and asset disappears from the **Deinstalled** pool.

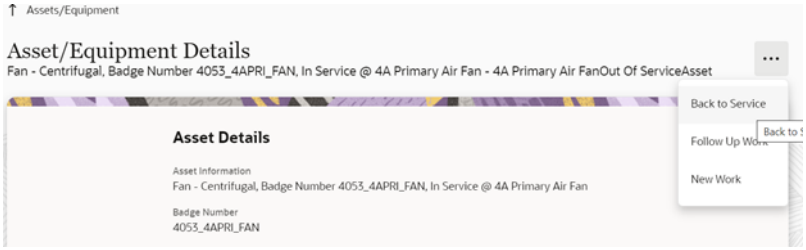
Moving Assets Back to Service

To move an asset back to service:

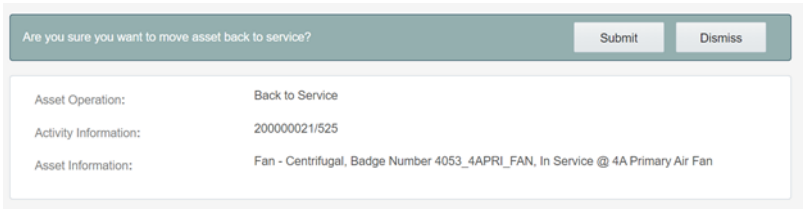
1. Click **Asset in Out of Service**.



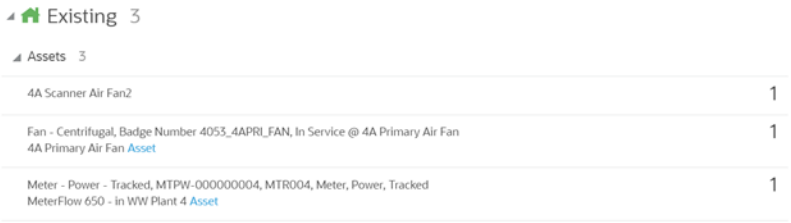
2. Click **Back to Service**.



3. Click **Submit**.



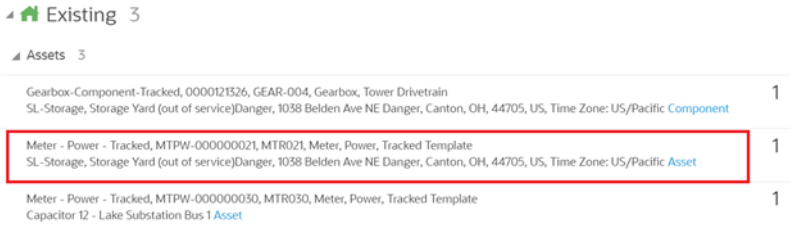
The asset moves to the **Existing** pool.



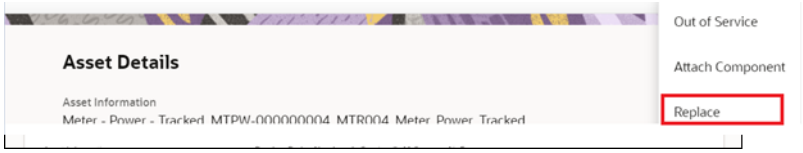
Replacing Assets

To replace an asset:

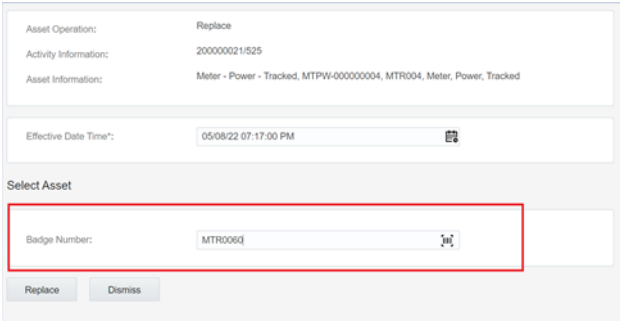
1. Select the asset that needs to be replaced.



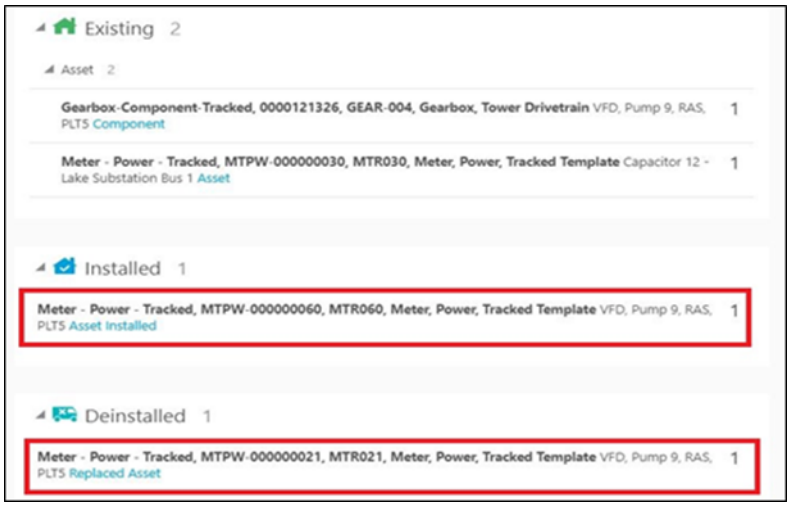
2. Click **Replace**.



3. Enter the badge number of the asset to be replaced with and click **Replace**.



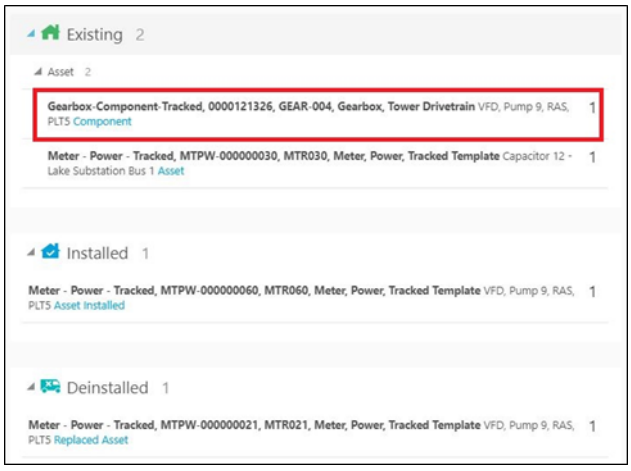
The new asset moves to the Installed pool and the replaced asset moves to the **Deinstalled** pool.



Replacing Components

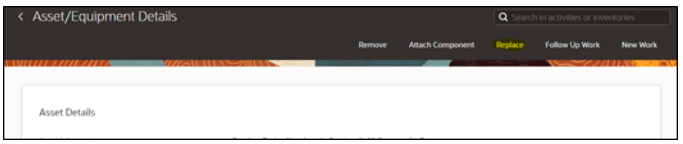
To replace a component:

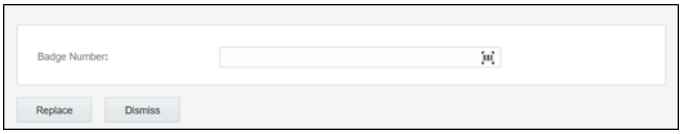
1. Select the component to be replaced.



2. Click **Replace**.

3. Enter the badge number of the replacing component and click **Replace**.



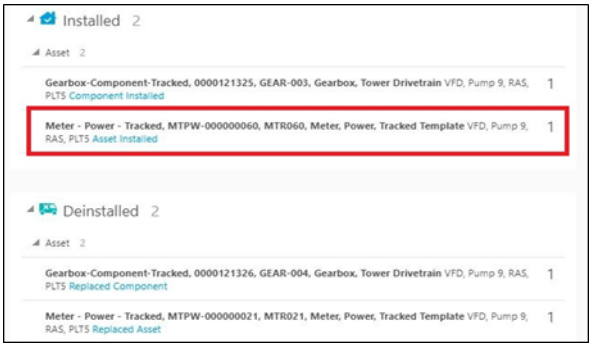


The replaced component moves to the **Deinstalled** pool and the newly attached component moves to the **Installed** pool.

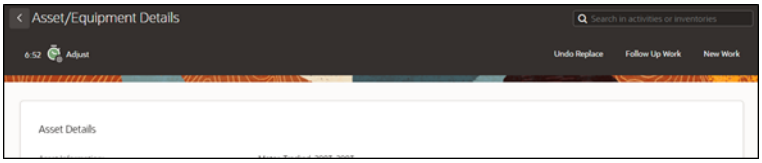
Undoing Asset Replacements

To undo replace an asset:

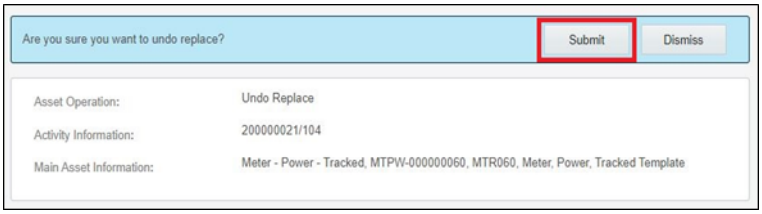
1. Click **Installed Asset/Component**.



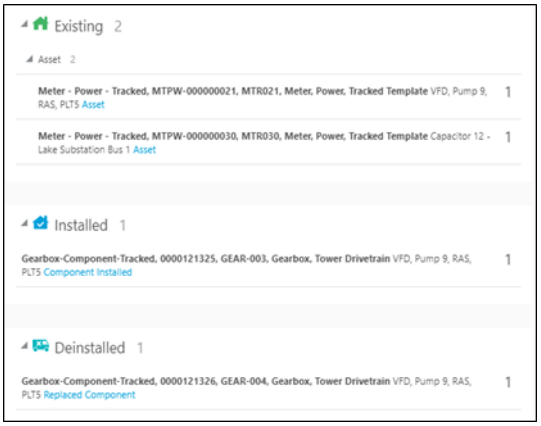
2. Click **Undo Replace**.



3. Click **Submit**.



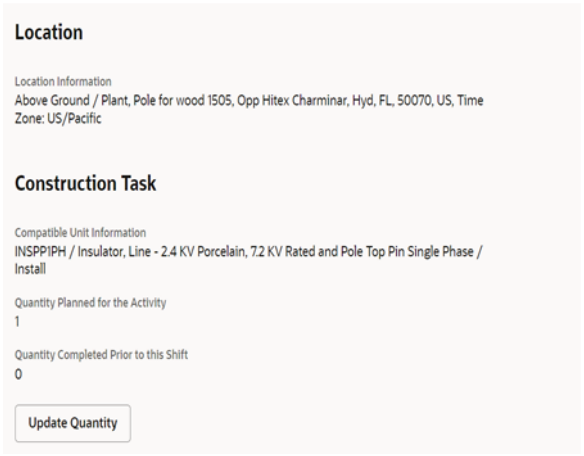
The replaced asset moves back to **Existing** pool.

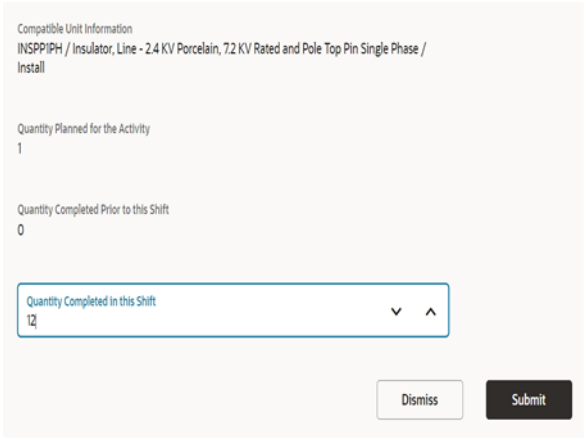


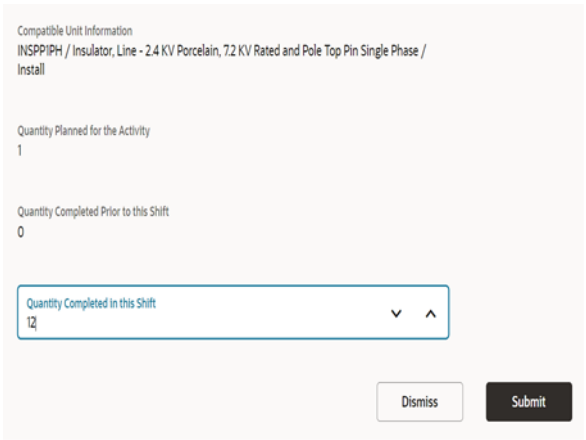
4. Repeat the above steps to undo replace for a component.

Update Quantity in Construction Work Activity

Field worker can update any extra quantity of equipment that is required apart from the planned quantity and quantity completed is divided into two fields **Quantity Completed prior to this shift** (sum of previous segments quantity for multiday activities and 0 for normal activity) and **Quantity completed in this shift**.


Location
Location Information
Above Ground / Plant, Pole for wood 1505, Opp Hitex Charminar, Hyd, FL, 50070, US, Time Zone: US/Pacific
Construction Task
Compatible Unit Information
INSPP1PH / Insulator, Line - 2.4 KV Porcelain, 7.2 KV Rated and Pole Top Pin Single Phase / Install
Quantity Planned for the Activity
1
Quantity Completed Prior to this Shift
0
Update Quantity


Compatible Unit Information
INSPP1PH / Insulator, Line - 2.4 KV Porcelain, 7.2 KV Rated and Pole Top Pin Single Phase / Install
Quantity Planned for the Activity
1
Quantity Completed Prior to this Shift
0
Quantity Completed in this Shift
12
Dismiss
Submit


Compatible Unit Information
INSPP1PH / Insulator, Line - 2.4 KV Porcelain, 7.2 KV Rated and Pole Top Pin Single Phase / Install
Quantity Planned for the Activity
1
Quantity Completed Prior to this Shift
0
Quantity Completed in this Shift
12
Dismiss
Submit

Pick Up and Follow Up Orders

Follow up orders are created for a new work related to the activity the crew is working on. Follow up work can include work orders and work requests.

To create a follow up order:

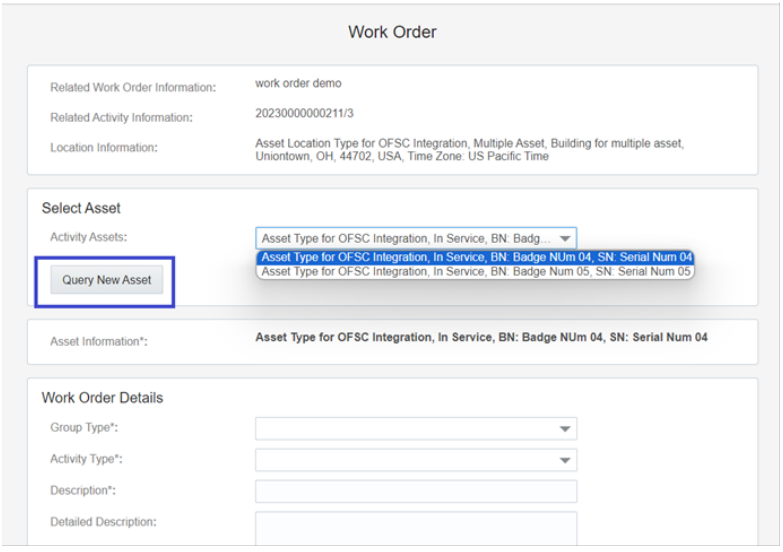
1. Navigate to the **Activity Details** page and click **Follow Up Work**.
2. From the **Level** drop-down list, select the type of follow up work to be created.
3. Click **OK**.

Follow Up Work Order

Creating a follow up work order will result in the creation of field activity in Oracle Field Service and the related work order in Oracle Utilities Work and Asset Cloud Service solution.

To create a follow up work order for one of the assets related to activity or for a new asset:

1. Select an asset linked to the existing activity from the **Activity Asset** drop-down list.
2. To select a different asset, click **Query New Asset**. This will launch a search against the Oracle Utilities Work and Asset Cloud Service solution.
3. Enter the search criteria and click **Search**.



4. Select an asset for which the work order should be created.
5. Enter the details related to follow up work order and click **Create**.

   A new activity is created in Oracle Field Service and a new related work order is created in the Oracle Utilities Work and Asset Cloud Service solution.
6. Click **OK**.

You can select the **Work It** option to assign a new activity to the crew.

> **Note:** Starting release 23A, the "planned service history" plugin is disabled for follow up work.

Follow Up Work Request

Creating a follow up work order will result in creation of a work request in the Oracle Utilities Work and Asset Cloud Service solution.

Note that a work request can be asset related and non-asset related.

Asset Related Work Request

Asset related work requests are created for assets.

You can specify one of the assets linked to the activity or query asset from the Oracle Utilities Work and Asset Cloud Service solution.

Enter the required information and click Create. A new work request will be created and sent to the Oracle Utilities Work and Asset Cloud Service solution.

Non-Asset Related Request

A non-asset related request is not linked to any asset and does not contain any asset information.

Work requests created by crew can be found on the crew **Requests History**.

> **Note**: Make sure the Oracle Integration Cloud endpoints are configured in the Pick Up Work plugin.

If the communication from Oracle Field Service to Oracle Integration Cloud fails, Oracle Field Service will retry the completion events that were in error state until the Oracle Integration Cloud communication is successful.

The time limit is 36 hours. After that, all event subscriptions will be deleted in Oracle Field Service.

Mobile Inventory Management

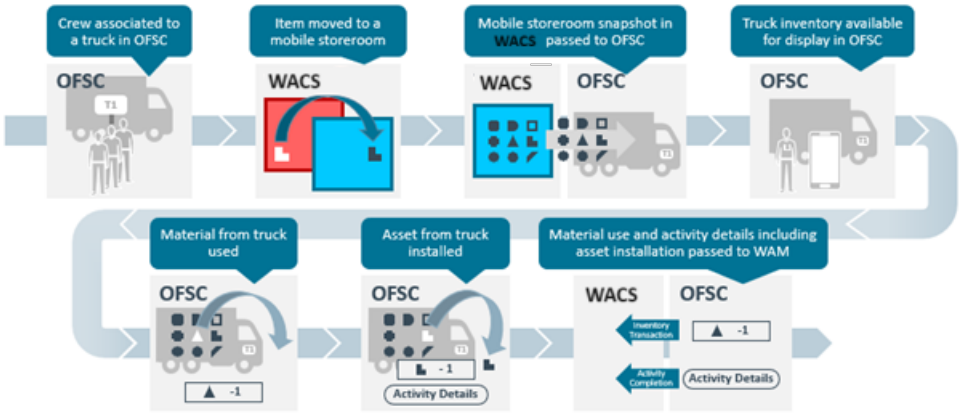
Mobile inventory management supports truck storerooms that contain assets and materials.

This section includes the following:

Overview

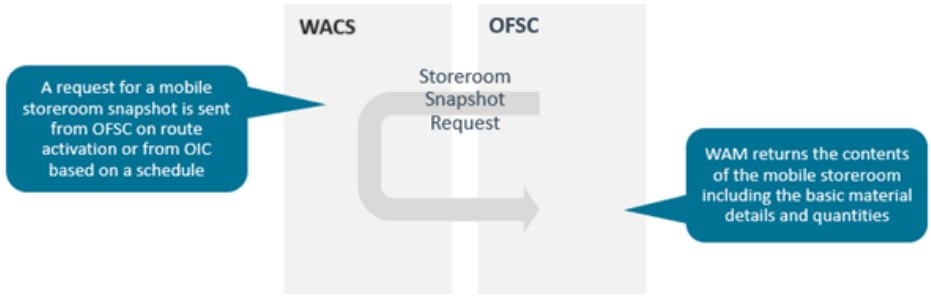
The Mobile Inventory Management functionality includes:

- Sending mobile storeroom content details from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service.
- Viewing the contents of a truck in a handheld device.
- Recording the use of an item for an activity in a handheld device.
- Updating content of Oracle Field Service truck for additional inventory.
- Passing the use of items from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service.



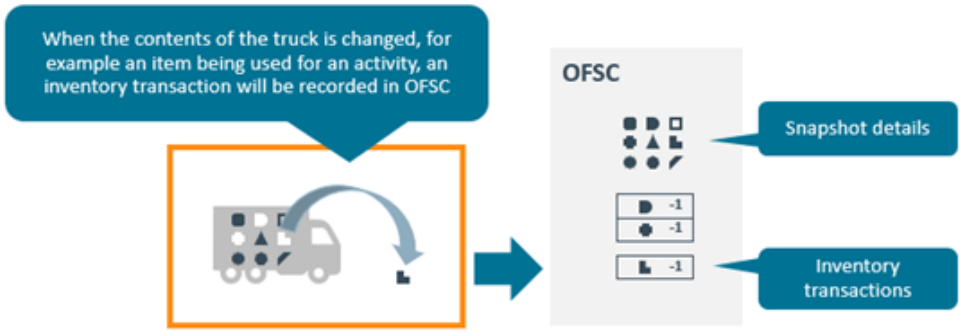
Mobile storerooms (trucks) and their inventories are managed in Oracle Utilities Work and Asset Cloud Service. A truck in Oracle Field Service is linked to a Oracle Utilities Work and Asset Cloud Service mobile storeroom.

On request, the contents of the Oracle Utilities Work and Asset Cloud Service mobile storeroom is passed to Oracle Field Service and the contents of the linked Oracle Field Service truck is updated.

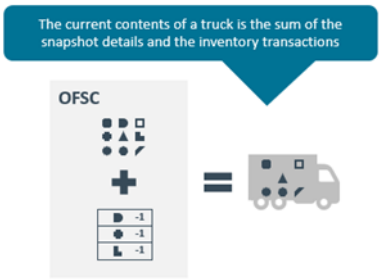


Loading the snapshot of the Oracle Utilities Work and Asset Cloud Service Mobile Storeroom linked to a truck should occur prior to or at the beginning of the relevant crew's shift. When a mobile storeroom snapshot is loaded into Oracle Field Service the contents of the linked Oracle Field Service truck is replaced with the details recorded in Oracle Utilities Work and Asset Cloud Service.

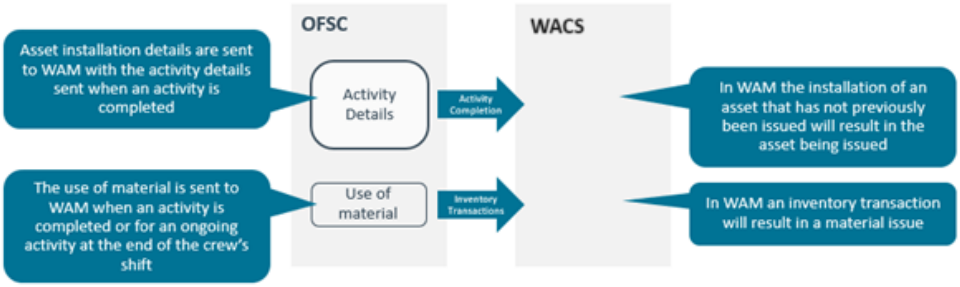
A crew can install assets and use material from their trucks for the activities they are working on. These truck inventory transitions are recorded in Oracle Field Service.



The content of the truck is the combination of the last mobile storeroom snapshot and the inventory transactions that have occurred since the last snapshot.



On activity completion and at the end of crew shift the use of assets and materials is sent to Oracle Utilities Work and Asset Management and the inventory of the mobile storeroom linked to the truck is updated.



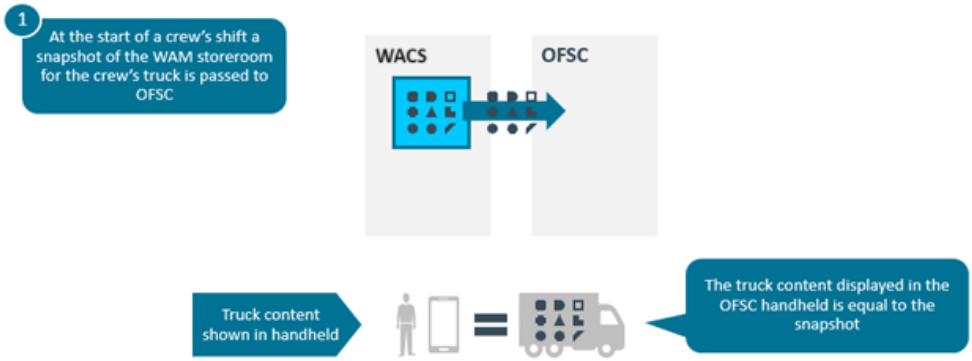
During a crew's shift, the inventory of the crew's truck could get updated. For example, additional items required for an activity could be picked up from a storeroom. These updates will be recorded in Oracle Utilities Work and Asset Cloud Service. To update the truck's inventory in Oracle Field Service, the crew requests an update of the truck inventory.

The following diagram represents integration flows for mobile inventories movement:

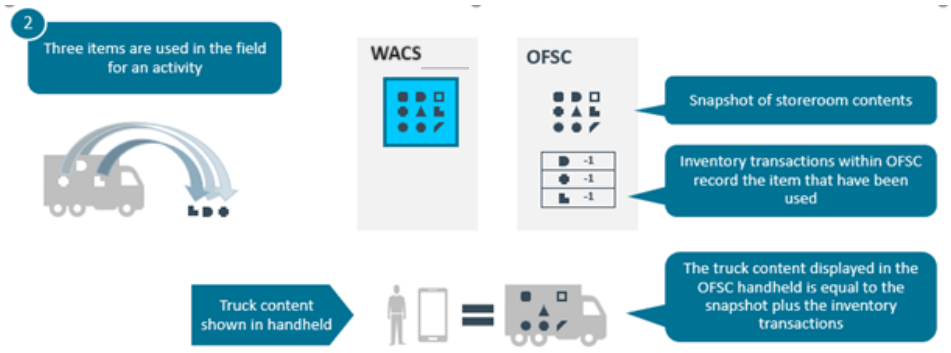
Truck Materials Lifecycle Examples

This section describes various truck materials lifecycle examples.

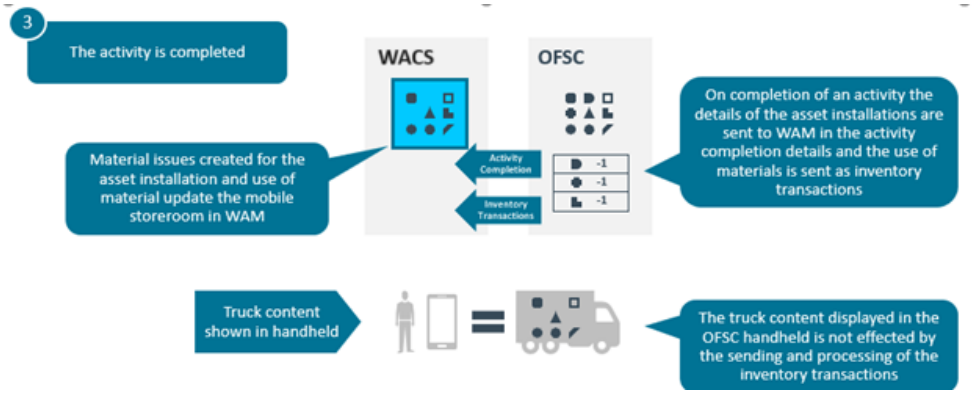
Snapshot at the start of the shift



Items used in the field

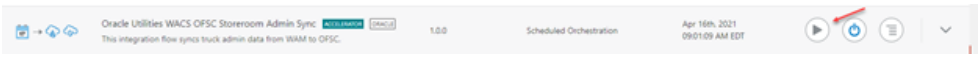


Oracle Utilities Work and Asset Cloud Service updated with item use

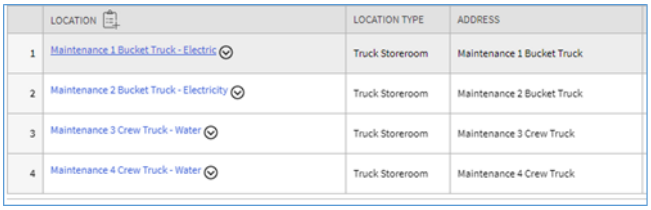


Truck Storeroom Admin Sync

This integration process passes storeroom data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service for the storerooms with a storeroom type whose storeroom category is Truck.



The following figure shows the truck storerooms in Oracle Utilities Work and Asset Cloud Service:



	LOCATION	LOCATION TYPE	ADDRESS
1	Maintenance 1 Bucket Truck - Electric	Truck Storeroom	Maintenance 1 Bucket Truck
2	Maintenance 2 Bucket Truck - Electricity	Truck Storeroom	Maintenance 2 Bucket Truck
3	Maintenance 3 Crew Truck - Water	Truck Storeroom	Maintenance 3 Crew Truck
4	Maintenance 4 Crew Truck - Water	Truck Storeroom	Maintenance 4 Crew Truck

The following figure shows trucks created by the integration in Oracle Field Service:

Truck Inventory Snapshot

This process passes the inventory of truck storerooms from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service updating the inventory of the Oracle Field Service truck that is linked to the Oracle Utilities Work and Asset Cloud Service storeroom.

Attention! This process will delete the content of the Oracle Field Service truck and replace it with the content of the linked storeroom in Oracle Utilities Work and Asset Cloud Service. Any unprocessed

inventory transaction in Oracle Field Service that is used in assets or materials will be lost.

The Truck Inventory Snapshot can be performed using one of the following three options:

- **Option 1: On Route Activation**

  On route activation of a crew or individual, Oracle Field Service checks if there are any trucks associated with that crew or individual. If there are any, it initiates the truck inventory snapshot process.

- **Option 2: Scheduled Truck Inventory Snapshot**

  A batch scheduled in Oracle Integration Cloud to run at a specific time initiates the truck inventory snapshot process for all truck storerooms.

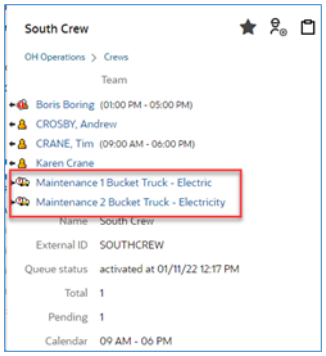
- **Option 3: On Request**

  The truck inventory snapshot process can be initiated by a dispatcher from the Truck Resource Inventory. This option can be used for exceptional situations.

Assigning Truck to Crews

A truck is assigned to a crew or individual. Once a truck is assigned, its contents are available to be used for those activities the crew or individual is working on.

In the example below, two trucks have been assigned to South Crew.



The inventory of these trucks is available to the crew member in the mobile application.

Using Inventories for Activities

You can see truck inventories on the activity's Asset tab. There are two types of items in a truck's inventory:

- Assets
- Materials

Assets

You can install an asset in a truck's inventory at a location associated with the activity being worked on.

1. Select the asset you want to install and click Install Asset.
2. If there is more than one location associated with the activity, select the location, and if necessary, adjust the installation date and time.

An asset will be installed at the location.

Materials

You can report material that has been used for an activity.

1. Select the item you want to use and click Use Item.
2. Specify the number of items used and click Use. The used items will appear in the Installed section.

Update Truck Inventories

During a crew's shift, the contents of a truck can be changed and the changes recorded in Oracle Utilities Work and Asset Cloud Service.

For example: Items can be added to a truck from a standard storeroom. The inventory can be changed. In this situation, a truck inventory update should be requested from Oracle Field Service.

On receipt of a truck inventory update request, Oracle Utilities Work and Asset Cloud Service returns the inventory changes to the truck's storeroom contents since the last snapshot. Changes to the Oracle Utilities Work and Asset Cloud Service content resulting from inventory transactions passed from Oracle Field Service are excluded.

Chapter 4

Data Relationships

Both applications need to be initially synchronized to make sure the same data is reflecting in the user interfaces. This task needs to be done by the administrator after setting up the environment and schedule it periodically later to maintain the data integrity.

This chapter focuses on the following:

- Oracle Utilities Work and Asset Cloud Service to Oracle Field Service Data Synchronizations
- Oracle Field Service to Oracle Utilities Work and Asset Cloud Service Data Synchronizations

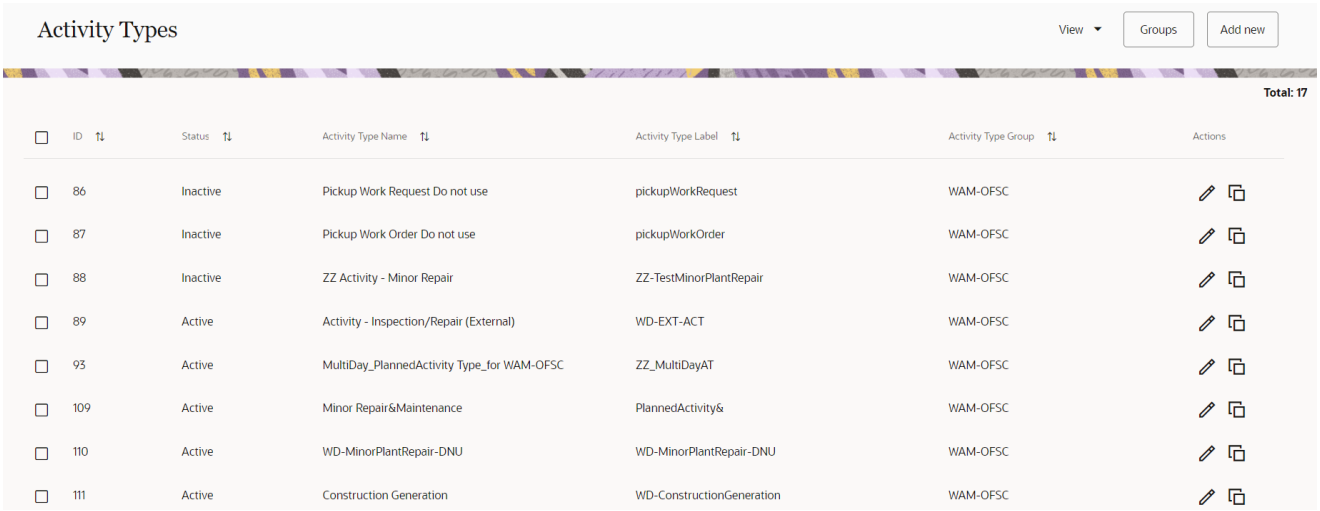
Oracle Utilities Work and Asset Cloud Service to Oracle Field Service Data Synchronizations

Mobile Control Data Sync

The control data and the activity types from Oracle Utilities Work and Asset Cloud Service are synced to Oracle Field Service. The work skill related configurations needed in Oracle Field Service are created to match activities with resources and for crew tracking. This synchronization happens on initial installation or on a need only basis when new control data from Oracle Utilities Work and Asset Cloud Service or work skill related configurations needs to be created or updated in Oracle Field Service.

Control Data includes codes and descriptions of selected admin entities, predefined characteristic types for asset attributes, characteristic type valid values, service history category, service class, and extendable lookup values. It also includes craft, equipment and other direct changes, whose resource type is internal, needed to support timesheet and resource usage.

Activity types define the categories of the activity supported by Oracle Field Service (in this case, Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service). If any Activity Type already exists in Oracle Field Service, it is skipped from syncing to avoid overriding of Activity Type settings in Oracle Field Service.



Control data from Oracle Utilities Work and Asset Cloud Service has six categories:

- controlDataEntities
- resourceTypes
- assetAttributes
- workClass
- serviceHistoryCategory
- serviceClass

The properties controlDataEntities.default, assetAttributes.default, and resourceTypes.default in WAMOFSC_ConfigProps lookups can be used to control this

sync based on the flag value. By default, this is set to “yes”. workClass, serviceClass, and serviceHistoryCategory will always be synchronized to Oracle Field Service application.

Equipment work skill creation is optional. It is controlled by property createEquipmentWorkSkills.flag in WAMOFSC_ConfigProps lookups. By default, this is set to “no”.

If Property assetAttributes.default in WAMOFSC_ConfigProps Lookup is set to “yes”, it populates the enum values for asset attributes predefined characteristics types and its valid values in Oracle Field Service.

> **Note:** Once a resource is created in Oracle Utilities Work and Asset Cloud Service, the resource code (craft code, equipment code and other resource code) cannot be changed. This sync integration process uses the resource codes to create the enumeration values for equipment, craft and other resource property in Oracle Field Service. Slash (/) also cannot be part of the resource code.

The enumeration values are populated for the following Oracle Field Service properties if the integration properties specified below are set to 'yes'.

Property in WAMOFSC_ConfigProps Lookup	**Oracle Field Service Properties**
controlDataEntities.default = 'yes'	• Crew Shift Types • Downtime Reason • Labor Earning Type • Material Unit of Measure • Measurement Meter Reason • Measurement Gauge Reason • Overtime Type • Pickup Work Category • Pickup Location Type • Pickup Work Type • Pickup Work Priority • Resource Unit of Measure • Stock Item Category
resourceTypes.default = 'yes'	• Craft • Equipment Type • Other Resource Type
assetAttributes.default = 'yes'	• WAM Map Asset Attribute List • WAM Map Attribute ValidValue • WAM Map Valid Values Description
None * These are always sync to Oracle Field Service	• Pickup Work Class • Activity Type To PSH • Service History Category Description • Service Class Description

Note: If admin data is deleted in Oracle Utilities Work and Asset Cloud Service, the enumeration value will not be deleted in Oracle Field Service. The sync integration process cannot delete enumeration values added to a property in Oracle Field Service; the OFSC REST API that updates the enumeration values of a property does not allow it. The only way to delete an enumeration value(s) in a property is by deleting the property, recreating the property, and run the sync to get the latest values. If Property resourceTypes.default in WAMOFSC_ConfigProps lookup is set to 'yes', a work skill and work skill property is created for each craft retrieved from Oracle Utilities Work and Asset Cloud Service.

Managing Work Skills

1. If Property resourceTypes.default in WAMOFSC_ConfigProps lookup is set to 'yes', a work skill and work skill property is created for each craft retrieved from Oracle Utilities Work and Asset Cloud Service. If the resourceTypes.default and createEquipmentWorkSkills.flag properties in the WAMOFSC_ConfigProps lookup are set to 'yes', it creates a work skill and work skill property for each equipment retrieved from Oracle Utilities Work and Asset Cloud Service.
2. Work skill conditions are also created based on the craft, equipment and the property values of workSkillCond.actvtySameSkillMaxWorker.default and workSkillCond.actvtyMaxEquipment.default from WAMOFSC_ConfigProps lookup.

Truck Storeroom Admin Sync

This synchronization process is used to sync storeroom data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service where the storeroom type is "Truck". Oracle Utilities Work and Asset Cloud Service will send only the active storerooms data at this time.

For each storeroom from the storeroom list returned by Oracle Utilities Work and Asset Cloud Service, only storerooms of TRUCK type are filtered and compared to each storeroom with the list of existing resources from Oracle Field Service.

a. If the resource from the list in Oracle Field Service does not exist in Oracle Utilities Work and Asset Cloud Service storeroom list, the resource status is updated as 'inactive' and sent to Oracle Field Service.

b. If the resource from the list in Oracle Field Service exists in Oracle Utilities Work and Asset Cloud Service storeroom list, the corresponding data in Oracle Field Service is updated.

c. If the storeroom from Oracle Utilities Work and Asset Cloud Service does not exist in Oracle Field Service, a new record in Oracle Field Service is created.

This synchronization process is a scheduled business flow which can be planned to run at a specific time of day/week/month to sync the truck admin data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service.

There is another synchronization process "WACS OFSC Schedule Storeroom Sync" used to synchronize individual truck's inventory from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service which is also a scheduled business flow that can be

planned to run at a specific time of day, week, or month, or can be ran manually whenever necessary.

Oracle Field Service to Oracle Utilities Work and Asset Cloud Service Data Synchronizations

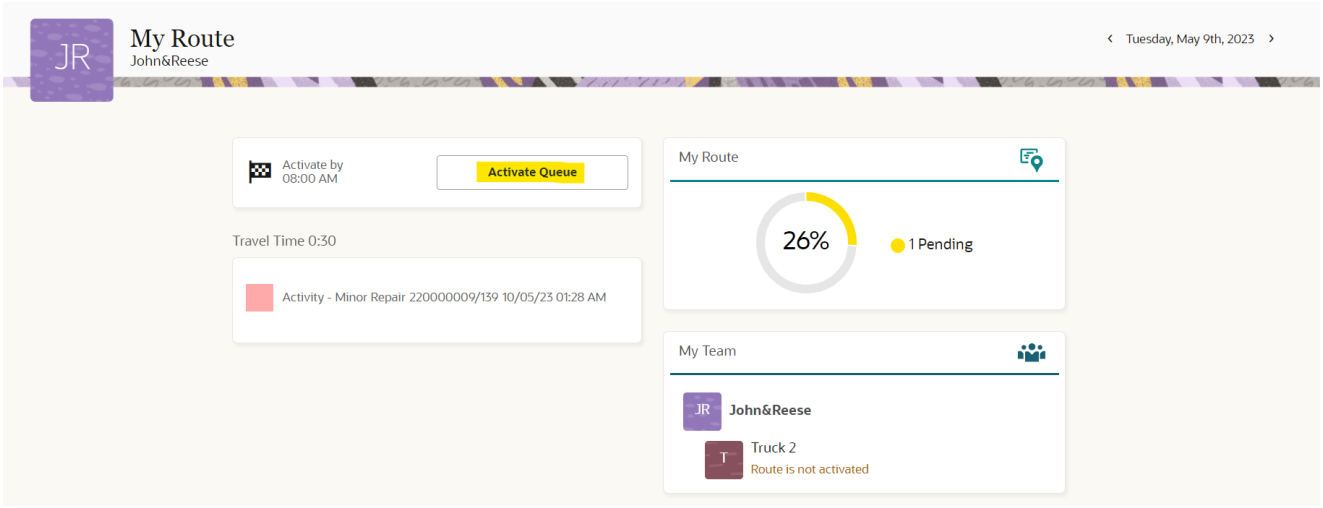
Truck Storeroom Inventory Snapshot Sync

This synchronization is used to sync inventory of each storeroom (individual truck data) in Oracle Utilities Work and Asset Cloud Service into Oracle Field Service. The truck storeroom inventory can be sync in multiple ways:

- Storeroom Sync on Route Activation
- Scheduled Storeroom Sync

Storeroom Sync on Route Activation

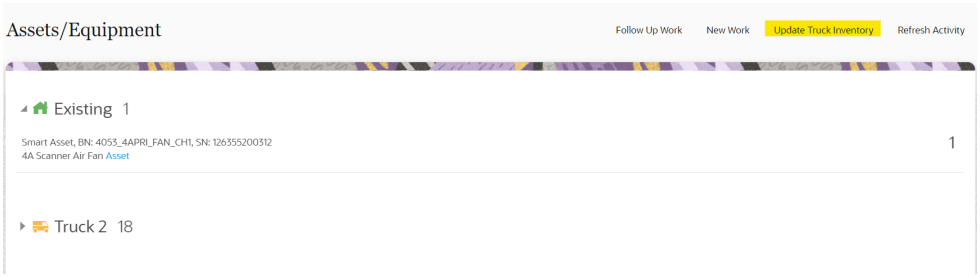
On route activation of a crew or an individual, if there are any trucks associated with that crew or an individual the initial storeroom inventory is synchronized.



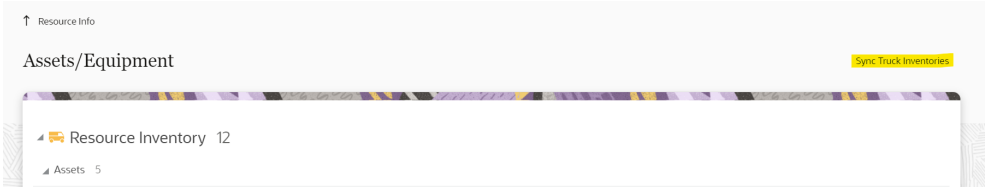
Scheduled Storeroom Sync

Batch scheduled from Oracle Integration Cloud to run at a specific time of day, week or month to run snapshot synchronization of all trucks synchronized between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service.

Use the **Update Truck Inventory** option available on the crew's **Assets/Equipment** screen to update the inventory when transfer in or transfer out happens from the truck. Adding new truck inventory does not come under this scenario. In Oracle Field Service we have lastSyncDateTime field which keeps track of the date when last time inventory sync happened. All the inventory transfer in or transfer out happened on or after this date from the truck gets synced up when "update truck inventory" is triggered. If no transfers happened, there will be no updates to the truck information.



On the Oracle Field Service admin screen, use **Sync Truck Inventories** on the **Resource Info** tab to update the truck inventory (new or transferred). Note that this data is not updated in the Oracle Field Service mobile screen.



Note: Before using the **Update Truck Inventory** or **Sync Truck Inventories** option, the truck's inventory in Oracle Field Service should be synchronized with Oracle Utilities Work and Asset Cloud Service. This can be achieved by triggering the Oracle Utilities WACS OFSC Schedule Storeroom Sync flow in Oracle Integration Cloud.

Appendix A

Considerations

Below are important considerations and known limitations for this integration:

- There is a limit up to 15 attachments per service history.
- Oracle Utilities Work and Asset Cloud Service operators can delete all attachments, but Oracle Field Service crews can only delete the attachment from their activity.

Appendix B

Additional Information - Integration Concepts

This chapter includes additional information about terms and concepts required for this integration. It describes examples of several use cases and defines key terms for both Oracle Utilities Work and Asset Cloud Service and Oracle Field Service respectively:

- Oracle Utilities Work and Asset Cloud Service
- Oracle Field Service

Oracle Utilities Work and Asset Cloud Service

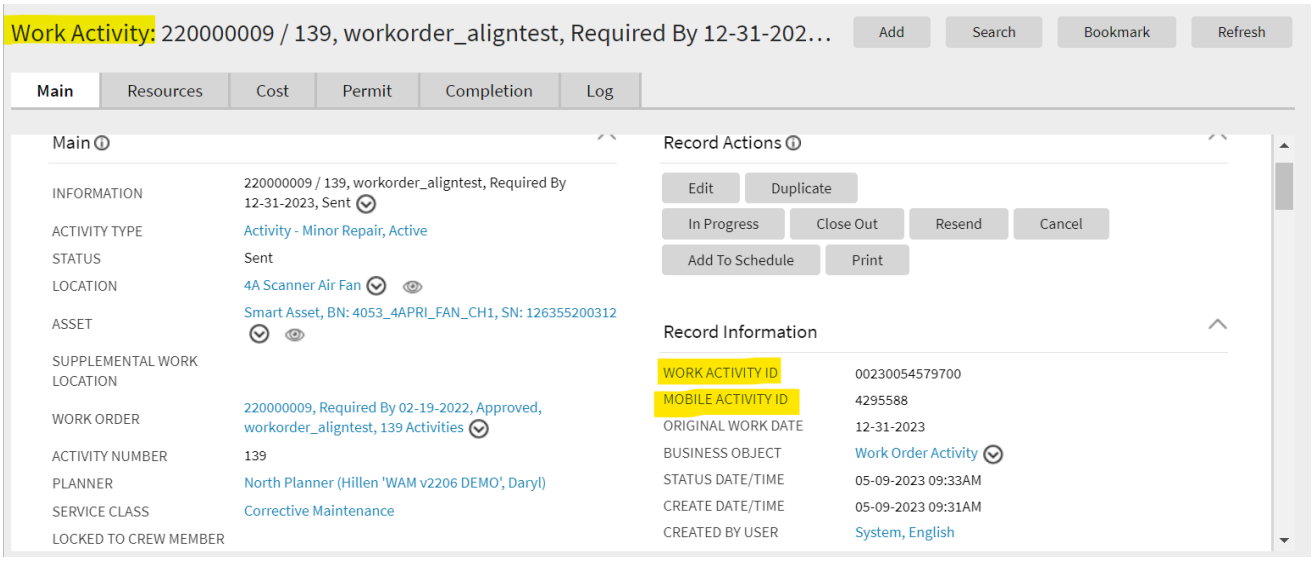
Oracle Utilities Work and Asset Cloud Service efficiently manages asset lifecycles, streamlines maintenance operations, maximizes supply chain performance, enhances safety, and improves regulatory compliance.

This section includes the following:

Activities

Work activities are work tasks that need to be completed and originate from a work order or a work order template. As examples, activities may be created for maintenance and inspection of assets, to create service history, and to install or exchange devices.

Example: An activity needs a particular crew to fix the issue. So, that activity is assigned to a crew in Oracle Field Service. These activities are identified in the Oracle Field Service by Mobile Activity ID or Work Activity ID.



Oracle Field Service

This section includes the following:

Admin

The Administrator plays an essential role in the application. The Administrator user type is assigned to an individual or group of individuals who oversee the regular maintenance and updates to users, resources, calendars, and the resource tree.

The Administrator is responsible for a combination of functions that can include:

- Managing users: Adding new users and deactivating existing users.
- Assigning user types to users.
- Resetting passwords.
- Managing the resource tree.
- Managing the resource calendars, shifts, and teamwork.
- Working with work zones, work skills, work conditions, and work skills groups. As an administrator, one of your key responsibilities is to manage user information.
- Unlocking functionality of any of the activities locked by field personnel.

There are two primary types of users:

- Users who use the manage aspect.

  Example: dispatchers and field managers

- Field service resources who use the mobile application

  Example: field service personnel

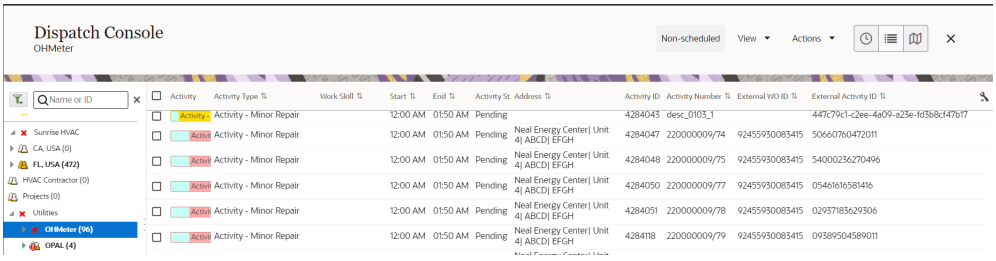
In either case, a user is someone who requires access to some part of the application's interface to act upon the incoming activities.

Many of these tasks are not daily tasks, but completed during setup of the application and management changes. Refer to the Oracle Field Service Administer documentation for more details.

Dispatch Console

The dispatch console is a dashboard for the dispatcher who can see all the activities that are scheduled or non-scheduled. The assigned dispatcher has a variety of tasks it can perform.

Refer to Dispatch Console Activities for more information.



Resource Tree

The resource tree provides a hierarchical view of your organization's resources, typically sorted by geographical region. It is shown on the left of the page.

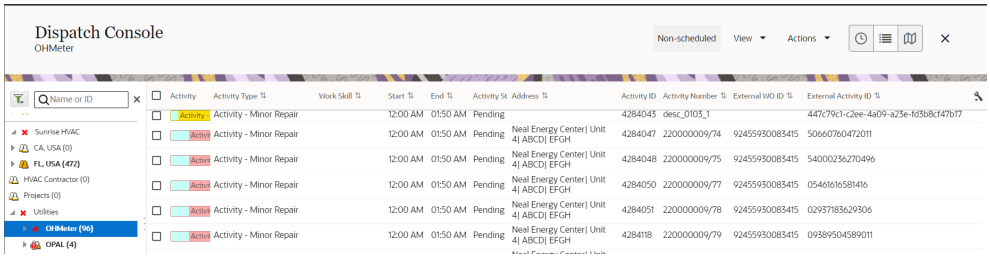
Use the **toggle** button to show or hide the resource tree. When you select a resource from the resource tree, the resource's activities are displayed in the work area on the right. Click the plus sign (+) next to an entity in the resource tree to expand and view the entities under that group or bucket. Click the minus (-) sign to collapse that view.

The resource types and the overview of the roles performed by each item in the resource tree are:

- **Field resource:** Performs work, has work skills, work zones associated, and has a related user that is an actual person performing work or a crew or people.
- **Vehicle:** Has work skills, inventory, and geolocation tracking enabled. When assigned to a team it may add the required work skills and inventory to be used by the team.
- **Tool:** Represents specific tools, such as 30-feet ladder and excavator. This resource can have work skills, inventory, and geolocation tracking enabled. When assigned to a team it may add the required work skills and inventory to be used by the team.
- **Bucket:** Used to accumulate work that is not yet distributed to field resources. Only the application can assign activities to this resource. This resource is used for Quota Management.
- **Organization unit:** Aggregates field resources, vehicles, and tools in the tree-like hierarchy to simplify management and reporting. This resource is used for Quota Management.

Buckets

Use organization units to sort and organize the items in the resource tree. In the following figure, you can note that buckets hold the activities that are not yet assigned to field resources.



Organization units are typically used to group resources by location. They cannot be route owners and cannot assign activities to them. Buckets can have activities. However, dispatchers can assign activities to buckets manually and Routing can assign activities to buckets automatically.

Field Resources

Resources are the people who perform the activities and the items that are paired with those people. Examples of resources include technicians, tools, and trucks.

Difference Between Resource, User, and Child Resource

A *resource* can be a field resource (a human being), a dispatcher, an administrator, a vehicle, or a tool. All resources are elements of the resource tree. A *user* is a field resource or any other user that has access to Oracle Field Service. A *child resource* is a resource that is added to a bucket or an organization unit element of the resource tree. In the hierarchy of the resource tree, the bucket or the organization unit appears at a higher level than the child resource. A child resource can be a field resource (a human being), a vehicle, or a tool.

Users are field resources that will login to the Oracle Field Service mobile application and work on activities. Depending on the user's role and permissions they will be able to have different responsibilities, such as a dispatcher, a manager, or an administrator user.

Appendix C

FAQs

Below is a list of frequently asked questions about the integration:

- Does Oracle Field Service know when a crew has lost communication? Can it send "out of range" indicators to Oracle Utilities Work and Asset Cloud Service?

  This is not supported in the current integration.

- If Oracle Utilities Work and Asset Cloud Service is configured to include a utility-specific field on event (special priority flag), can that field be passed to Oracle Field Service?

  Yes, this can be handled by utilizing user defined fields in the integration mapping, and by adding the appropriate fields in Oracle Field Service.

- Can Oracle Field Service be used for Automatic Vehicle Location, passing vehicle coordinates to Oracle Utilities Work and Asset Cloud Service?

  This is not currently supported. Oracle Utilities Work and Asset Cloud Service uses the MultiSpeak adapter to get vehicle coordinates for displaying AVL crews. If Oracle Field Service is configured to pass location coordinates via the MultiSpeak protocol, Oracle Utilities Work and Asset Cloud Service would accept the data.